CENGAGE

Fifth Edition

Stress Management for Life

A Research-Based Experiential Approach

Olpin ❧ Hesson

Fifth Edition

Stress Management for Life

A Research-Based, Experiential Approach

Michael Olpin Weber State University

Margie Hesson South Dakota State University

CENGAGE

Australia • Brazil • Mexico • Singapore • United Kingdom • United States

CENGAGE

***Stress Management for Life: A Research-Based, Experiential Approach,* Fifth Edition**
Olpin, Hesson

VP, Product Management: Thais Alencar

Project Team Manger: Maureen McLaughlin

Product Manager: Courtney Heilman

Product Assistant: Hannah Shin

Marketing Manager: Shannon Hawkins

Content Manager: Samantha Rundle

IP Analyst: Ann Hoffman

IP Project Manager: Kelli Besse

Production Service and Compositor: MPS Limited

Art Director: Sarah Cole

Text & Cover Designer: Sarah Cole

Cover Image: Mint Images/Mint Images RF/Getty Images

© 2021, 2016, 2013 Cengage Learning, Inc.

WCN: 02-300

Unless otherwise noted, all content is © Cengage.

ALL RIGHTS RESERVED. No part of this work covered by the copyright herein may be reproduced or distributed in any form or by any means, except as permitted by U.S. copyright law, without the prior written permission of the copyright owner.

For product information and technology assistance,
contact us at **Cengage Customer & Sales Support,**
1-800-354-9706 or support.cengage.com.

For permission to use material from this text or product,
submit all requests online at **www.cengage.com/permissions.**

Library of Congress Control Number: 2020904568

Student Edition:
ISBN: 978-0-357-36396-6

Cengage
200 Pier 4 Boulevard
Boston, MA 02210
USA

Cengage is a leading provider of customized learning solutions with employees residing in nearly 40 different countries and sales in more than 125 countries around the world. Find your local representative at **www.cengage.com.**

Cengage products are represented in Canada by Nelson Education, Ltd.

To learn more about Cengage platforms and services, register or access your online learning solution, or purchase materials for your course, visit **www.cengage.com.**

Printed in the United States of America
Print Number: 01 Print Year: 2020

Brief Contents

Preface x

PART I
Getting Started

CHAPTER 1 Stress in Today's World 1
CHAPTER 2 Self-Assessment 15

PART II
Understanding Stress

CHAPTER 3 The Science of Stress 30
CHAPTER 4 The Mind/Body Connection 43

PART III
Stress-Prevention Strategies

CHAPTER 5 The Power of Perception 59
CHAPTER 6 Thinking and Choosing 74
CHAPTER 7 Mindfulness 93
CHAPTER 8 Managing Emotions 110
CHAPTER 9 The Importance of Values 129
CHAPTER 10 Spirituality 144
CHAPTER 11 Time and Life Management 163
CHAPTER 12 Money Matters 184
CHAPTER 13 Social Support, Relationships, and Communication 201
CHAPTER 14 Creating a Healing Environment 221
CHAPTER 15 Healthy Lifestyles 241

PART IV
Stress-Reduction Techniques

CHAPTER 16 Introduction to Relaxation 259
CHAPTER 17 Take a Breath 269
CHAPTER 18 Autogenics 281
CHAPTER 19 Progressive Relaxation 289
CHAPTER 20 Guided Imagery: Using Your Imagination 299
CHAPTER 21 Meditation 311
CHAPTER 22 Yoga 326
CHAPTER 23 Complementary and Alternative Health 344
CHAPTER 24 What Else Can I Do? 360
Glossary 376
Index 384

Contents

Preface x

PART I
Getting Started

CHAPTER 1 Stress in Today's World 1
1.1 Stress in Today's World 2
1.2 Stress: What Is It? 3
1.3 Yerkes–Dodson Principle 3
1.4 The Terminology of Stress 4
Challenge ("Good") and Threat ("Bad") Stress 4
Acute and Chronic Stress 4
1.5 Holistic Health 6
Understanding Health 6
1.6 Dimensions of Health 6
Physical Health 6
Mental Health 7
Emotional Health 7
Spiritual Health 7
Social Health 7
Holistic Health: Putting It All Together 7
1.7 Nature or Nurture 9
1.8 Sources of Stress 9
Time Management 9
Personal Expectations 9
Family Expectations and Family Life 10
Employment Decisions and Finances 10
Academic Demands 10
Home Environment 10
Relationships 10
Physical Health Issues 11
Environmental Stressors 11
Information Overload 11
Choices 11
Daily Hassles 11
1.9 Conclusion 12

CHAPTER 2 Self-Assessment 15
2.1 Self-Assessment 16
2.2 Where Are You Now Stress-Wise? 16
2.3 Assess Your Stress 17
Resting Heart Rate 17
Breathing Pattern 17
Respiration Rate 17
Stress-o-Meter 17
Assess Your Stress Results 18
2.4 Symptoms of Stress: Assessment 18
2.5 Perceived Stress Scale (PSS) 19
2.6 Inventory of College Students' Recent Life Experiences 21
2.7 Ardell Wellness Stress Test 22
2.8 Student Stress Scale 23
2.9 Stress Vulnerability Factors 23
2.10 Tombstone Test 25
2.11 Daily Stress Diary 25
2.12 Conclusion 27

PART II
Understanding Stress

CHAPTER 3 The Science of Stress 30
3.1 The Science of Stress 31
3.2 Stress and the Big Bear 31
3.3 The Fight-or-Flight Response 32
3.4 Physiological Response to Stress 33
Autonomic Nervous System Responses 34
3.5 The Stress Response in Today's World 36
Acute Stress 37
Chronic Stress 37
3.6 The General Adaptation Syndrome 38
Stages of the General Adaptation Syndrome 38
Application of the General Adaptation Syndrome 39
3.7 The Stress Response and You 40
3.8 Five Myths About Stress 40
Myth 1: In an Ideal World, There Would Be No Stress 40
Myth 2: What Is Stressful for Me Is Stressful for You 40
Myth 3: Only Unpleasant Situations Are Stressful 40
Myth 4: No Symptoms, No Stress 40
Myth 5: Stress Is Inevitable, So You Can't do Anything About It 41
3.9 Conclusion 41

CHAPTER 4 The Mind/Body Connection 43
4.1 The Mind/Body Connection 44
4.2 Psychological Health 44

4.3 The Role of Chronic Stress in Disease 45
Direct and Indirect Effects of Chronic Stress 45
Allostatic Load 45
4.4 Medium-Term Chronic Stress 46
Effects of Medium-Term Chronic Stress 46
Medium-Term Stress and the Immune System 47
4.5 Long-Term Chronic Stress 48
Stress and the Heart 48
Stress and Cellular Growth and Repair 49
Stress and the Immune System 49
Stress and Aging 50
Stress and Learning 51
Stress and Inflammation 51
Other Disease Conditions of Stress 51
4.6 How the Mind and Body Communicate 52
Psychosomatic Illness 53
The Placebo and Nocebo Effects 54
Psychoneuroimmunology 55
4.7 Conclusion 56

PART III
Stress-Prevention Strategies

CHAPTER 5 The Power of Perception 59
5.1 The Weeds Crowd Out the Flowers 60
5.2 The Power of Perception 60
5.3 Perception 61
Are You in Danger? 61
Stress Comes from Within 62
5.4 The World Is NOT a Stressful Place 63
5.5 Cognitive Restructuring 65
5.6 Hardiness 66
Commitment—Turning Problems into Opportunities 66
Challenge—Change as Challenge Rather Than Threat 66
Control 67
5.7 Putting It All Together 70
5.8 Conclusion 71

CHAPTER 6 Thinking and Choosing 74
6.1 Thinking and Choosing 75
6.2 Cognitive Distortions 75
6.3 Thinking Errors 76
6.4 Cognitive Techniques That Help Overcome Distorted Thinking 77
Positive Self-Talk 77
Thought-Stopping 80
Power Language 80
Going with the Flow 80
6.5 Underlying Theories and Practices 81
Conditioned-Response 81
Choice 82
Levels of Responding 83
6.6 Rational Emotive Behavior Therapy 88
REBT Guidelines 88
ABCDE Technique 89
6.7 Conclusion 90

CHAPTER 7 Mindfulness 93
7.1 Mindfulness 94
7.2 The Nature of Reality 94
7.3 The Here and Now 95
7.4 Understanding Mindfulness 96
7.5 Qualities of Mindfulness 97
Beginner's Mind: Thinking Like a Child 97
Nonjudging 97
Acceptance of What Is Happening 98
Nonattachment 99
Nonstriving 99
7.6 Mindfulness as a Way of Being 100
7.7 Why Be Mindful? 101
7.8 Benefits of Mindfulness 102
7.9 Experiencing Mindfulness: Testing the Principle 103
7.10 A Simple Mindful Exercise 104
7.11 Inner Mindfulness Meditation 105
7.12 Ways to Practice Being More Mindful 106
7.13 Planning for the Future 107
7.14 Putting It All Together 107
7.15 Conclusion 108

CHAPTER 8 Managing Emotions 110
8.1 Managing Emotions 111
8.2 The Physiology of Emotion 111
The Benefits of Positive Emotions 112
8.3 Guilt and Worry 112
Letting Go of Worry 112
Guidelines to Help You Manage Worry 112
Reducing Test Anxiety 113
Letting Go of Guilt 115
8.4 Fear 116
Types of Fear 116
It's about Growing 116
Comfort and Discomfort Zones 117
8.5 Putting It Together 118
Fear Factors 118
Strategy for Overcoming Fear 120
The Fear–Faith Connection 120
8.6 Anger 121
Effects of Anger 123
The Only Reason We Get Angry 123
Expressing Anger 124
Anger Blocker 125
8.7 Hostility 126
8.8 Conclusion 126

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

CHAPTER 9 The Importance of Values 129

9.1 The Importance of Values 130
9.2 Understanding Your Values 130
  Discovering Your Values 131
  Cognitive Dissonance 132
9.3 Carried Away in Mediocrity 133
9.4 Source of Values 133
9.5 Values within Cultures 134
  Predominant Values in the United States 134
  Predominant Alaska Native Values 134
9.6 The Dynamic Quality of Values 136
9.7 Acquiring Values 136
9.8 Beliefs about Values 136
9.9 Types of Values 137
  Instrumental and Terminal Values 137
9.10 Values Clarification 138
9.11 Creating Your Personal Constitution 138
  Step 1: Identify Your Values 138
  Step 2: Prioritize Your Values 139
  Step 3: Write a Clarifying Paragraph for Your Values 140
9.12 Conclusion 142

CHAPTER 10 Spirituality 144
10.1 Spirituality 145
10.2 The Spiritual Quest 146
10.3 Spirituality and Religiosity 146
10.4 Research on Spirituality 148
  Defining Terms 149
  Placebo Power 149
  Variables in Religious, Health, and Lifestyle Research 149
  Bottom Line on Research 150
10.5 Five Qualities of Spiritual Health 150
  Meaning and Purpose 151
  Belief in a Higher Power 152
  Connectedness 153
  Compassion for Others 153
  Spiritual Behaviors and Meaningful Spiritual Rituals 157
10.6 An Action Plan for Stress Management Through Spiritual Wellness 159
10.7 Conclusion 159

CHAPTER 11 Time and Life Management 163
11.1 Time and Life Management 164
11.2 What Is Time Management? 164
11.3 Time and Stress 164
11.4 Planning for Control 165
  Pareto's Law 165
  Methods of Time Management 166
11.5 ABC123 Prioritized Planning 167
  Phase I: Make a List 167
  Phase II: Assign a Value to Each Item on the List, Using ABC 168
  Phase III: Prioritize Again, Using 123 168
11.6 Quadrant Planning 170
  First Things First 170
  Urgency versus Importance 170
  Quadrant Planning in Action 171
11.7 Lifebalance 173
11.8 Keys to Creating Balance 174
  Simplifying 174
  Doing What Really Matters 174
  Don't Just Do Something—Sit There! 175
  Balancing Attitude—Balancing Structure and Spontaneity 175
11.9 Serendipity 176
  The Three Princes of Serendipity 176
  The Keys to Serendipity 176
  Applying Serendipity 176
  Split-Page Scheduling 177
11.10 Procrastination 177
  Styles of Procrastination 177
  Tips for Overcoming the Procrastination Habit 178
11.11 Digital Time and Life Management 180
11.12 Conclusion 181

CHAPTER 12 Money Matters 184
12.1 Money Matters 185
12.2 The ABCs of Money Management 186
  Assessment 186
  Budget 187
  Control 188
12.3 Doodads and Credit Cards 189
  Doodads 189
  Credit Cards 191
12.4 Stress on the Job 193
  Preventing Job Stress 193
12.5 Additional Tips for Managing Your Money 195
12.6 Can Money Make You Happy? 195
  Affluenza 196
  Reference Anxiety—Keeping Up with the Joneses 196
  Money and Relationships 197
12.7 Putting It All Together—What the Experts Say 198
12.8 Conclusion 198

CHAPTER 13 Social Support, Relationships, and Communication 201
13.1 Social Support, Relationships, and Communication 202

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

13.2 Social Support 202
Types of Social Support 203
Social Support and Stress 203
Social Support and Health 204
13.3 Relationships 205
Relationships with Pets 206
Relationships in Marriage 207
Love and Relationships 208
13.4 Communication 210
Listening 211
Touch 214
Men and Women—Different Can Be Good 214
13.5 Managing Conflict 215
Styles of Conflict Resolution 215
13.6 Conclusion 218

CHAPTER 14 Creating a Healing Environment 221
14.1 Creating a Healing Environment 222
14.2 Stress and the Environment 222
Types of Environmental Stressors 222
Individual Perceptions 223
Learned Response and the Environment 223
Managing Environmental Stressors 223
14.3 A Healing Environment 224
14.4 Color 224
14.5 Light 225
14.6 Odors and Air 226
Aromatherapy 226
Air Quality 227
14.7 Noise 228
Perceived Noisiness 228
Effects of Noise 228
Relaxing Sound 229
14.8 Temperature 230
14.9 Taking Control of Your Surroundings 230
Nature 230
Organizing and Simplifying 231
14.10 Ergonomics 233
14.11 Technology and the Environment 234
Technostress 234
Technology and Stress 235
Managing Technology Stress 237
14.12 Conclusion 237

CHAPTER 15 Healthy Lifestyles 241
15.1 Healthy Lifestyles 242
15.2 Exercise 242
Exercise as a Stress Buffer 242
Other Benefits of Exercise 243
Components of Physical Fitness 244
Which Exercise Is Best? 244
Sticking with Exercise 245
15.3 Nutrition 246
A Healthy Diet 246
Nutrition and Stress 247
Drinking Water 248
What to Limit or Avoid in Your Diet 248
Overeating 248
15.4 Stress and Healthy Weight 249
Eating to Cope—The Food/Mood Connection 249
Unused Glucose 249
The Cortisol Connection 249
15.5 Eating Disorders 250
Types of Eating Disorders 250
Causes of Eating Disorders 251
Factors That Can Contribute to Eating Disorders 251
15.6 Sleep 252
Sleepy Connected Americans 252
How Much Sleep Do You Need? 253
Healthy Sleep Advice 253
15.7 Lifestyle Behaviors to Avoid 254
Tobacco 254
Alcohol 254
Drugs 256
15.8 Conclusion 256

PART IV
Stress-Reduction Techniques

CHAPTER 16 Introduction to Relaxation 259
16.1 Introduction to Relaxation 260
16.2 Understanding Relaxation 261
16.3 Benefits of Relaxation 262
16.4 Getting Started 262
16.5 Relaxation Sensations 264
16.6 Use Good Judgment 264
16.7 Time for a Nap—A Power Nap 265
Benefits and Background 265
How the Power Nap Works for Relaxation 265
16.8 Doing the Power Nap 265
Adding the Power Nap to Your Daily Routine 266
16.9 Conclusion 267

CHAPTER 17 Take a Breath 269
17.1 Take a Breath 270
17.2 Background 270
17.3 How Breathing Works 270
17.4 Benefits of Relaxing Breathing 272
17.5 Breathing and Relaxation 273

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

17.6 How to Do Relaxing Breathing 273
17.7 Breathing Exercises 273
    Natural Breathing 274
    Simple Diaphragmatic Breathing 274
    Relaxing Breathing 274
    Reduced Respirations Technique 275
    Alternating Nostril Breathing 276
    Full Breathing 277
    Visualization Breathing 277
    Command Breathing 277
    Pelvic Tilt with Diaphragmatic Breathing 278
    Breathing While Stretching 278
17.8 Conclusion 278

CHAPTER 18 **Autogenics** 281
18.1 Autogenics 282
    The Power of Suggestion 282
18.2 Background of Autogenic Training 282
18.3 How Autogenics Works 283
18.4 Benefits of Autogenics 283
18.5 Experiencing Autogenics 284
    Creating Favorable Conditions 284
18.6 A Simple Autogenics Script 284
18.7 Conclusion 286

CHAPTER 19 **Progressive Relaxation** 289
19.1 Progressive Relaxation 290
19.2 Background 290
19.3 Muscle Physiology 291
    All-or-None Principle 291
19.4 Muscles and Relaxation 291
19.5 How PMR Works 292
19.6 Benefits of Progressive Relaxation 292
19.7 How to Do Progressive Muscle Relaxation 293
    Active Progressive Muscle Relaxation 293
    Passive Progressive Relaxation 295
19.8 Conclusion 297

CHAPTER 20 **Guided Imagery: Using Your Imagination** 299
20.1 Guided Imagery: Using Your Imagination 300
20.2 Background 300
20.3 The Mind and How It Works 301
    Hypnosis 301
    The Conscious and Subconscious Mind 302
20.4 Imagery and Visualization 303
20.5 Uses of Imagery 303
20.6 Relaxation Guided Imagery: What Is It? 305
20.7 Benefits of Guided Imagery 305
20.8 Guided Imagery as a Technique for Relaxation 306
    Suggestions for Improving Guided Imagery Practice 307
    A Simple Guided Imagery Script 307
20.9 Conclusion 308

CHAPTER 21 **Meditation** 311
21.1 Meditation: It's Not What You Think 312
21.2 Meditation: What Is It? 312
21.3 What Meditation Is Not 314
21.4 Meditation Put into Practice 314
    Mantra Meditation 314
    Breathing Meditation 316
21.5 Additional Ways to Meditate 317
    Contemplation 317
    Breath Counting 317
    Thought-Watching 317
    Chakra Meditation 318
    Walking Meditation 318
21.6 Benefits of Meditation 319
    Physiological Benefits 320
    Psychological Benefits 320
21.7 Frequently Asked Questions about Meditation 321
    How do I stay focused when I meditate? 321
    When is the best time to meditate? 322
    How long should I meditate? 322
    Will meditation get easier with practice? 322
    Does it matter if I lie down, rather than sit, during meditation? 322
    How will I know if I am meditating correctly? 323
21.8 Conclusion 323

CHAPTER 22 **Yoga** 326
22.1 Yoga 327
22.2 Background 327
22.3 Overview of Yoga Styles 328
22.4 Benefits of Yoga 329
22.5 Hatha Yoga 331
    Postures—Asanas 331
    Pranayama—Breathing 332
    Dhyana—Meditation 333
    Putting It All Together 333
22.6 How to Practice Yoga 333
22.7 Taking Precautions Before Starting Yoga 334
22.8 Additional Tips to Enhance Your Yoga Experience 335
22.9 Finding a Yoga Class 335
22.10 Sample Poses 336
22.11 Conclusion 342

CHAPTER 23 Complementary and Alternative Health 344

23.1 Complementary and Alternative Health 345

23.2 Understanding Complementary and Alternative Health 345

Complementary Versus Alternative 345

Most Common CAM Therapies 346

23.3 Categories of Complementary and Alternative Medicine 347

23.4 Applications of the 5 Categories of CAM to Stress Management 347

Alternative Medical Systems 347

Mind/Body Interventions 349

Biologically Based Therapies 350

Energy Therapies 350

Manipulative and Body-Based Methods 353

23.5 Types of Massage 355

Swedish Massage 355

Self-Massage 356

23.6 Conclusion 357

CHAPTER 24 What Else Can I Do? 360

24.1 More Stress-Reduction Strategies 361

24.2 Laughter and Humor 362

Benefits of Laughter 362

How Laughter Works 363

Subjective Nature of Humor 363

Laughter/Humor Strategies for Stress Prevention 363

24.3 Music 364

Music and Mood 364

History of Music 364

The Effects of Music on the Body and Mind 364

How Music Works 365

Which Music Is Best for Stress Management? 366

24.4 What Else Can I Do? 367

24.5 "Solutions" to Avoid 371

Don't: 372

24.6 Stress Management for Life—Planning for the Future 373

24.7 Conclusion 373

Glossary 376

Index 384

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

Preface

A little knowledge that acts is worth infinitely more
than much knowledge that is idle.

—*Kahlil Gibran*

Stress Management for Life is more than just another book about stress. It is an experience. This book will teach you what you need to know about stress—and it doesn't stop there. You will find a toolbox of skills you can apply immediately to prevent and manage stress in your life. You will learn about stress; you will learn and practice specific techniques, and you will be inspired to continue a life-long program of stress management. *Stress Management for Life* provides information, inspiration, and application—a powerful approach to a healthy, balanced life.

Listen to what this student says about *Stress Management for Life:*

> This book helped me to get in touch with myself and the way I view a variety of things in my life. What I learned will help me well into my future. This book should be required reading for every student. The book was very inspirational in motivating me to take action to live a better, stress-free life. The materials and activities were beyond good. With all the perceived stress we experience in our daily lives, on top of the rigorous academic studies, it is easy to let things get to us. This book would help everyone put things into perspective. The book opened my eyes to the variety of stress-relieving exercises I can use throughout my daily life. The things I learned will last a lifetime.

You have complete control over three things in your life: what you think, what you say, and how you behave. To make a change in your life, you must recognize that these gifts are the most powerful tools you possess in shaping the form of your life.

—*Sonya Friedman*

You, too, can learn to replace unhealthy stress with life-enhancing energy. The best news is that it's up to you! You are in charge of the choices you make every day. Through reading, thinking, learning, and actually practicing the strategies presented in *Stress Management for Life*, you will be on your way to a healthier, more balanced, and more productive life. The real power of this book will be found in the action you take. You will learn to experience the benefits of energizing relaxation immediately. And you will be prepared to develop a lifetime plan to assure that these benefits will continue long after your class is over.

Stress Management for Life is:

- A practical guide for incorporating stress management into your daily life.
- A holistic-approach to prevent, reduce, and manage unhealthy stress.
- A "how to" book with clear instructions on stress management techniques that work.
- A book that will change your life, enhance your health, and improve your quality of life.

Overview of *Stress Management for Life*

Part I: Getting Started In the introduction to stress management, you will begin thinking about the most common sources of stress facing college students in today's world. *Stress Management for Life* is written to provide you with a holistic approach to stress management. You will learn how each dimension of health—physical, mental, emotional, spiritual, and social—can be managed for a more balanced approach to stress management. You will personalize the information by completing a variety of stress self-assessments that will help you understand your stressors and how you handle them. Students often report that this assessment of their stress captures their attention and sets the stage for their motivation to learn and change.

Part II: Understanding Stress Part II explores the physical and psychological implications of stress—how the body and mind communicate. Learn about psychoneuroimmunology and other exciting research on the connection between mind and body. You might be surprised by the comprehensive list of physical symptoms and diseases caused by stress. Could stress be contributing to your chronic headaches, frequent colds, or difficulty sleeping? Find out in Part II.

Part III: Stress-Prevention Strategies Part III offers some concrete and practical tools that you can incorporate into your life with immediate results to *prevent* stress in the first place. By applying the POPP formula or living "A Day Above the Line," you will learn how changing how you think about things can prevent stress and dramatically improve how you feel. You will receive some tips for eliminating stress by managing time and organizing your schedule. You will read about how to control emotions including anger, fear, and worry. Values clarification, spirituality and stress, financial management, and a healing environment are just a few of the exciting topics covered here.

Part IV: Stress-Reduction Techniques Despite our best efforts to prevent stress, we know that stress happens. In Part IV you will learn a variety of techniques designed specifically to help you reduce stress. You will be amazed to find that simple techniques like the Power Nap, breathing exercises, meditation, autogenics, and yoga can leave you feeling relaxed and energized. You will learn about massage, guided imagery, the latest in complementary and alternative approaches, and other powerful stress-reduction techniques. You will be able to incorporate the methods that work best for you, and that fit your lifestyle, values, and goals, into a plan from which you will reap benefits for a lifetime.

New in the Fifth Edition

Each chapter has been revised and updated to keep you current on the latest in stress-management advancements and to help you stay abreast on current stress-related issues.

New to this edition:

- Sentence-by-sentence revision designed to improve readability. This edition is even more enjoyable to read.
- Updates to the current extent that stress is affecting adult college students.
- New focus on the relaxing effect of soft, slow breathing.
- Additional information on sleep–updated information to help you get better sleep and fall asleep faster.
- New information on how stress affects learning and memory.
- New information on the ways a stressful prenatal environment may increase a person's reactivity to stressful situations as an adult.

Features

Stress Management for Life is written in a *clear and easy-to-understand* style. The reading level and content are geared for university students like you. This book doesn't try to cover everything about stress. Instead, it covers everything that matters to successfully prevent and manage stress in your life.

Who said a textbook has to be boring? The authors of *Stress Management for Life* teach stress-management courses to university students every semester. They have taught stress management to thousands of students. They know from experience that the best learning happens in an *interesting, engaging, challenging, and positive* environment. This book has many features to make this a positive and engaging experience for you including:

- **Chapter quotations** for inspiration and insight.
- **Learning Objectives** to clearly guide you in your learning.
- **Keywords,** bolded in the chapter and tied to definitions in the Glossary.

- **Frequently Asked Questions** to capture your interest about things on your mind to which you want answers.
- **Real People, Real Stories,** beginning each chapter with true stories that bring the information to life.
- **Stress Stories** scattered throughout the chapters, which describe the authors' own experiences to help you better understand and relate to the content.
- **Stress Studies** throughout the book to keep you informed on the latest and most relevant research on topics involving stress and stress management.
- **FYI** (For Your Information) tidbits of motivational and interesting information scattered throughout the chapters.
- **Stress-Busting Behavior** checklists for quick, interactive application of content.
- **Culture Connections** that will open your mind and increase your awareness of stress topics from cultures around the world.
- **Time Tips** with specific, proven suggestions from students just like you to help prevent stress by managing time.
- **Key points and a list of key terms** at the end of each chapter to reinforce the chapter's most important content and terminology.
- **Stress-Management Labs** at the end of each chapter to provide you with an opportunity to review and apply important learning.

To the Instructor

The authors of *Stress Management for Life* are full-time professors who teach stress-management courses every semester, both face-to-face and online, to hundreds of students each year. During their many years of teaching stress management to students across the country, they searched high and low for just the right book for their students. They wanted a book that would:

- Emphasize experiential learning by clearly explaining the "how to" of stress management and prevention.
- Cover the important aspects of stress management without going into so much depth that students get lost and lose interest.
- Capture students' interest by presenting the information in a clear, interesting style with a variety of attention-grabbing features throughout the book.
- Include topics that are sources of stress for college students today—finances, time management, relationships, spiritual stress, and many others.
- Provide motivation and inspiration along with facts.
- Build on a strong foundation of well-researched information.
- Provide opportunities for students to practice relaxation techniques while they are learning the content.
- Be teacher-friendly and include a comprehensive *Instructor's Manual* and test bank.
- Include easy-to-use ancillaries and supplements, including guided relaxation exercises.

The authors wrote *Stress Management for Life* to meet these needs.

Stress Management for Life is written so that the chapters can be assigned in the order that works best for you and your students. Combining an activity chapter from Part IV with a chapter from Parts I, II, or III is an especially effective teaching strategy. Students get to start practicing relaxation techniques immediately.

Ancillaries

A deliberate goal of *Stress Management for Life* and the accompanying ancillaries is to provide you with a ready-to-go package to make your job easier. The authors are teachers, just like you, who know what makes the job easier.

Stress-Relief Activities The unique collection of Audio Relaxation Exercises included on the Instructor Companion Site provides clear demonstrations of many stress-management techniques

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

presented in Part IV of the book. Techniques available on the website include the Power Nap, autogenics, progressive relaxation, relaxing breathing, a mindful relaxation, and three guided imageries. This collection of Relaxation Activities was developed specifically to supplement the content in *Stress Management for Life*. The students will be able to read about the methods and also will have the opportunity to practice the techniques for optimal results.

Guided practice creates powerful experiential learning for effective relaxation. Students who have practiced the relaxation exercises often comment that the exercises became one of the most helpful and useful tools in their stress-management course, enabling them to achieve effective relaxation at home. Many instructors use the Stress-Relief Activities in the classroom to assist them in teaching these methods for relieving stress.

Cengage Testing Powered by Cognero Cengage Testing Powered by Cognero is a flexible, online system that allows you to:

- author, edit, and manage test bank content from multiple Cengage solutions
- create multiple test versions in an instant
- deliver tests from your LMS, your classroom, or wherever you want

PowerPoint Lecture Slides Spark class discussion with these slides, which are filled with active-learning activities to get students engaged.

About the Authors

Michael Olpin is a professor in the Department of Health Physical Education and Recreation at Weber State University in Ogden, Utah, where he teaches courses in stress management, mind/body wellness, and wellness coaching. His background includes instruction in stress management at four institutions of higher education and more than 30 years of studying the subject. He has published other books on stress management including, *The World is NOT a Stressful Place*, and *Unwind: 7 Paradigms of a Stress-Free Life*. He has presented many workshops and papers on stress management and mind/body wellness both in his own state and around the country. He consults privately for individuals and corporations in stress management, along with other areas of health and high-level wellness.

Margie Hesson is a Registered Nurse and retired College of Nursing faculty at South Dakota State University. She is endorsed by the American Holistic Nurses Association as a Certified Holistic Stress Management Instructor. She is the author of the *Journal for Stress Management for Life*, two general-audience books on stress and healthy living, and is a contributing author to numerous textbooks. In addition to more than 30 years' experience as a nurse and a teacher, she has travelled around the world exploring health care in other countries and is a frequent presenter on health-promotion topics at the state, national, and international levels. Professor Hesson developed the Stress Management for Life course for students at South Dakota State University.

Acknowledgments

This fifth edition couldn't have happened without the help and support of many. Thanks to all the professionals at Cengage for their valuable contributions. Many others worked behind the scene and we thank each of them for moving this book through the steps to publication. We also appreciate the guidance from Dr. James Hesson. As an experienced author, his suggestions and insights helped shape the book from the very beginning.

Thanks, too, to those who served as reviewers: Jerome Kotecki, Ball State University; Brenda Moretta Guerrero, Our Lady of the Lake University; Kahlil Kuykendall, George Washington University; Yasmine Harding, Towson University; and Alissa Leavitt, Portland State University. We appreciate their time and energy, which helped us make this fifth edition even better. Their suggestions and wise advice enhanced the quality of this book immeasurably.

Michael's Acknowledgments It feels to me like people are more stressed than ever. As I watch the crazy way things unfold around us, and as I work with people who struggle with so many personal challenges, it's no wonder stress levels continue to rise. That being said, I am so happy with the way the information in this book continues to help people with their stress. And even more exciting is the knowledge that people who use this textbook don't sell it back to the bookstores. They keep it and share it with their family and friends. Together, we are working to solve a problem that everybody struggles with and nobody needs or wants. That's good news!

None of this could have happened, however, without the passion and commitment of my wonderful co-author, Margie Hesson, and all the terrific folks at Cengage who helped construct this text. They see the same things that I do. It's clear they are as eager as I am to make an impact. I am deeply appreciative of each person who played a part in putting this book together.

I am also grateful to my wonderful wife, Shanyn, and my four awesome kids, Analise, Erica, Adam, and Ben who continue to be my greatest sources of inspiration, joy, and happiness. I love them, dearly.

I'm also thankful for all the thoughtful students and instructors with whom I have worked over the years. Curiously, our wisest ideas and best information seems to come not when we are pouring through books and articles on stress management, but in the middle of lively classroom discussions. Someone asks a question, we play with it, and an insight hits us with startling clarity. We test it, and it proves to be true. This tells me we are moving in the right direction.

Margie's Acknowledgments Thanks to my co-author, Dr. Mike Olpin, for his expertise in stress management, positive attitude, and work ethic. His years of teaching stress management have resulted in a keen understanding of how to help others manage stress. I am grateful for the rich and rewarding professional relationship with Mike.

Photographer Jenny Evans of Eden Blue Photography provided professional pictures and expert consultation on the photos. Thanks to Jenny for always capturing the image we envisioned to help communicate visually what we couldn't always say with words.

Thanks go to my colleagues and students at South Dakota State University College of Nursing. Many of my students contributed personal stress stories and valuable suggestions in an effort to help other students learn about stress management.

My family continues to be a source of inspiration to me, and I feel very blessed to have them in my life. Thanks to our children, David Hesson and Jenny and Rich Evans. Most of all, I am grateful for my #1 stress-reliever—my husband, Jim. He is my greatest supporter, and I can't thank him enough for encouraging me to set goals and embrace new opportunities. I continue to be inspired by Jim's sincere desire to help others through his writing. His textbook, *Weight Training for Life,* is written to help others and I tried to model his commitment in our book.

chapter

1

Stress in Today's World

Exit Madison Avenue & 42 Street
nd Central
Subway Map
1901

Rudi Von Briel/PhotoEdit

> Without stress, there would be no life.
>
> —*Hans Selye*

Is stress always bad?

Stress seems to be everywhere. Can I do anything about it, or is it just an inevitable demand for living in today's world?

Was I born with a specific ability to manage stress? Is successful stress management a result of heredity or the environment?

Learning Objectives

Study of this chapter will enable you to do the following:

1.1 Define the terms *stress* and *stressor*.

1.2 Define and explain the similarities and differences between eustress and distress.

1.3 Differentiate among acute, acute episodic, and chronic stress.

1.4 Relate stress to the five dimensions of holistic health—physical, mental, emotional, spiritual, and social.

1.5 Discuss some of the most common stressors college students experience today.

Real People, Real Stories

Lian's Story Lian was about to graduate, but reflecting on her first year of college still brought some painful memories. Here is Lian's story.

***

My first year of nursing school proved to be more stressful and more challenging than I had bargained for. It wasn't just the 18 credits and 6 lab hours that had me floundering. I was also working 20 to 30 hours per week at a local grocery store and trying to maintain a social life.

Early in the semester, I began to feel the stress. I started cutting back on my social life because I needed to study or work. Day after day, I kept reminding myself that this situation was "just for this semester" and "I can get through this."

My stress started affecting me physically. By the first week of October, I had lost 5 pounds and was beginning to have stomach cramps nearly every day. My weight loss and stomach cramps were caused mainly by my not eating. I would get stressed out and skip meals. My sleep patterns started changing, too. I needed more sleep to be able to barely function.

Some days I slept 14 to 16 hours but still felt tired. Other days I could not sleep at all. By Thanksgiving break, I had lost 10 pounds and was taking prescribed muscle relaxants and ulcer medications.

My emotions started changing, too. I cried at the drop of a hat, sometimes over nothing. I took long, hot showers so my roommates wouldn't see me crying. I also became angry easily. I couldn't seem to get happy about anything. I quit caring about my appearance, so I stopped wearing makeup and fixing my hair.

School was the primary stressor, and my grades began to show it. As my grades started slipping, I became even more stressed out. I was worried that I would fail a class and be dropped from the nursing program, so I spent more time studying.

I tried so hard to conceal my problems because I didn't want to admit I couldn't handle things. I didn't want people to think I was stressed out and such a mess. How could I ever be a good nurse and help other people if I couldn't even help myself?

It was tough for me to do, but I finally told my family and friends what I was going through. With their help, I made several changes in my life. The first meaningful change came with the end of my busy, class-loaded semester. When registering for classes the next semester, I cut back my class load. I also found a new job that paid more per hour, so I could work less. My parents helped me out financially as much as they could. My boyfriend kept a 24/7 "hotline" for me, and he encouraged me to call him whenever I felt stressed. I started riding my bicycle and doing yoga to "destress." I also set aside time each day just for myself, when I could do anything I wanted.

I'm still learning how to manage my stress, but my first year in nursing school taught me a lot about myself and how I handle stress. I learned what my limits are and what can happen if I don't deal with my stress appropriately. I'll graduate in a month, and I know I'll still get anxious, but now I know how to deal with stress in a healthier way.

FYI

Got Stress?

In 2016, nearly two-thirds of college students reported "overwhelming anxiety," up from 50% just 5 years earlier, according to the National College Health Assessment. For 7 straight years, it has been the top complaint among college students seeking mental health services, notes the *Chronicle of Higher Education*. Nearly a quarter say their anxiety affects their academic performance.

"Honestly, I've had more students this year hospitalized for anxiety, depression, and other mental health issues than ever," said Kathy Reamy, school counselor at La Plata High School in southern Maryland and chair of the NEA School Counselor Caucus.

Source: *"The Epidemic of Anxiety Among Today's Students." March 2019, NEA Today. Retrieved May 17, 2019 from http://neatoday.org/2018/03/28/the-epidemic-of-student-anxiety/.*

1.1 Stress in Today's World

"It was the best of times, it was the worst of times," Charles Dickens wrote of 18th-century France in his masterpiece, *A Tale of Two Cities*. Could the same be said for you, today's college student? Never have college students been faced with such vast opportunities, so much freedom of choice, and such an array of information. These opportunities, the many decisions, and the information overload can leave you feeling overwhelmed and stressed.

Will this be the best of times or the worst of times for you? With the proper skills and the right information, you can be in control of your well-being and your destiny. *Stress Management for Life* is packed with information that will help you do more than merely survive your college years and beyond. These can be the best of times for you. Given the right tools, the power to make it so is within you.

1.2 Stress: What Is It?

Stress, stressors, eustress, distress, good stress, and bad stress. What is stress all about? Hans Selye, the noted stress researcher, once said, “Stress is a scientific concept which has suffered from the mixed blessing of being too well known and too little understood.”

Producing an accepted definition of stress is not easy. Nurses and physicians, psychologists, biologists, engineers, and students may have different meanings in mind when they talk about stress. Here is one useful definition: **Stress** is a demand made upon the adaptive capacities of the mind and body.[1] This definition helps us understand the following three important aspects of stress:

1. How you experience stress depends on your personal view of the stressor, and it can affect you positively and negatively.
2. Your *reaction* to events in life, rather than the events themselves, is what determines whether your experience is stressful or not.
3. Stress is a demand upon the body’s capacity. When your ability to manage stress is robust and healthy, the outcome is positive. When you can’t seem to meet the demand, the result is adverse.

Managing stress is like building muscle. To make bigger biceps, you regularly perform arm curls with gradually increasing weight. Over time, your muscles respond to the overload and become bigger and stronger. The key is to find the proper balance. Too little weight will not produce the desired results, and too much weight may result in fatigue and injury. You need to overload the muscle just enough to make it stronger. It is the same with stress: Too little stress leads to boredom and lethargy, and too much stress leads to physical and emotional problems. The right balance leads to a productive, healthy life.

Although we often think of stress as harmful, keep in mind that stress can be stimulating and helpful. Think of how boring life would be without some changes and challenges to push you along, to provide opportunities to gain experience and grow, and to provide the impetus for accomplishing your goals in life! (See Figure 1.1.)

1.3 Yerkes–Dodson Principle

Harvard physicians Robert Yerkes and John Dodson first described the relationship between stress and performance in 1908.[2] The **Yerkes–Dodson Principle** implies that, to a certain point, a specific amount of stress is healthy, useful, and even beneficial. In addition to enhanced performance, an appropriate amount of stress can translate into one’s health and well-being.

Activation of the stress response is often essential for success. We see this in situations such as sporting events, academic pursuits, and even in creative and social activities. As stress levels increase, so does one’s performance. This relationship between increased stress and increased production, however, does not continue indefinitely. Stress or arousal

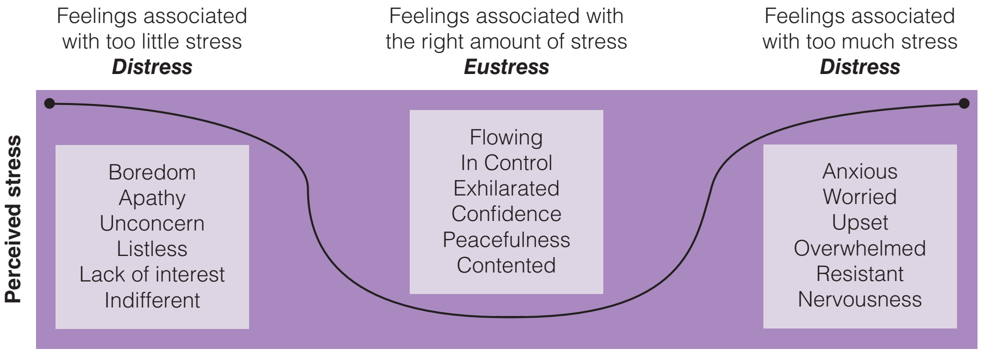

Feelings associated with too little stress
Distress
Feelings associated with the right amount of stress
Eustress
Feelings associated with too much stress
Distress
Perceived stress
Boredom
Apathy
Unconcern
Listless
Lack of interest
Indifferent
Flowing
In Control
Exhilarated
Confidence
Peacefulness
Contented
Anxious
Worried
Upset
Overwhelmed
Resistant
Nervousness

FIGURE 1.1
Feelings Associated with Perceived Stress . . . Finding the Balance

Bill Varie/Corbis/Getty Images

College students are faced with many stressors. What is your number 1 stressor?

can improve performance, but when stress exceeds one's ability to cope, this overload contributes to diminished performance, inefficiency, and even health problems.

An excellent metaphor to remind us that we each have an ideal amount of stress is the tension in the strings of a guitar. When a guitar is strung too tightly (too much tension), the string will sound a note higher than desirable. The guitar string, when tightened to its maximum, is likely to snap. The same string, if not tightened sufficiently, will play a note that is lower than is desirable. If it is strung without any tension, no sound at all will come from it. The proper tension results in the perfect note. The same metaphor can illustrate how healthy we are and how we feel with too much or too little stress.

1.4 The Terminology of Stress

Stress can be good—a challenge, or bad—a threat. Stress can be acute or chronic. These and other variances of stress are defined below.

Challenge ("Good") and Threat ("Bad") Stress

A **stressor** is any event or situation that an individual perceives as a challenge or a threat that causes him or her to either adapt or start the stress response. In both cases, the physiology turns on resources to prepare to handle a demand. When the demand is perceived as dangerous, the body prepares for imminent danger and does what it needs to do to prevent harm from the threat. When the demand is viewed as a challenge, the body musters its resources to perform optimally. (The stress response will be explained fully in Chapter 3.)

Hans Selye, one of the first people to study the effects of stress, coined the term **eustress** to describe the positive, desirable stress that keeps life exciting and helps to motivate and inspire. Events such as going off to college, getting married, starting a new job, or having a baby can be happy, joyous, *and* stress-producing. Eustress also involves managing stress successfully, even when dealing with a negative stressor. Notice in Figure 1.2 that eustress is represented on the curve where stress level, health, and performance increase simultaneously. Eustress implies that a certain amount of stress is useful, beneficial, and even good for our health, much like the perfectly strung guitar string.

Distress refers to the adverse effects of stress that drain us of energy and surpass our capacity to cope. Often when we talk about stress, we are referring to distress. Notice the point in Figure 1.2 where stress continues to increase, yet performance and health begin to decline. This downward curve represents distress. For best performance and well-being, you want to stay on top of the curve.

Jennifer Evans/Candy Apple Photography

Getting married is an example of a positive stressor, also known as eustress.

Acute and Chronic Stress

Stress can be acute or chronic. **Acute stress** results from a short-term stressor. It appears suddenly, is usually quite intense, and then disappears quickly. Imagine being out for a leisurely evening stroll when suddenly, from out of nowhere, a massive, angry dog leaps from the bushes, growling, with teeth bared. Your response would fit the definition of acute stress.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

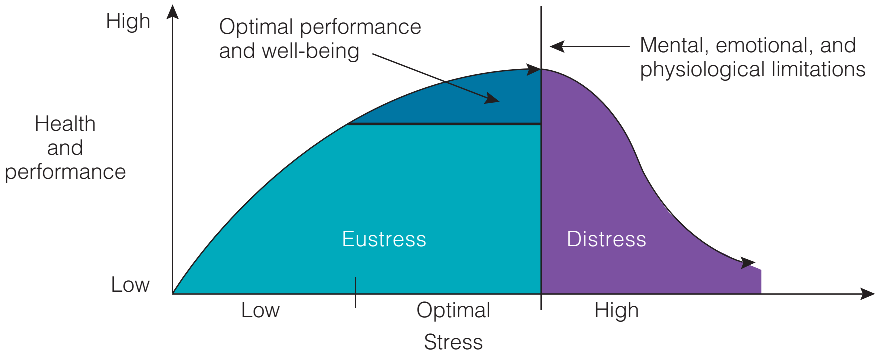


FIGURE 1.2
Relationship among Stress, Health, and Performance

Source: *"Relationship among Stress and Health and Performance," Figure 12.1 from* Lifetime Physical Fitness and Wellness, *11th ed., by W. K. Hoeger and S. A. Hoeger (Belmont, CA: Wadsworth/Cengage Learning, 2011, p. 385).*

Have you ever been cruising down the highway, relaxing to your favorite tunes when you glanced in your rearview mirror to see the flashing lights of a police car bearing down from behind? If so, chances are you experienced acute stress at that time.

If you have ever parachuted or taken part in similar exhilarating activities, you notice that when you manage acute stress well, it can help you think clearly and perform optimally. Acute stress can be exciting and stimulating in small doses—but too much is exhausting.

People experiencing **episodic acute stress** seem to be perpetually in the clutches of acute stress. These are the people who make you say, "What now?!" when you see them racing toward you. They seem to be always in a rush—but usually late. If something can go wrong, it will. They can't seem to get their act together or organize the many self-inflicted demands and pressures that clamor for their attention. They often blame their problems on other people and external events.

People who have frequent episodes of acute stress tend to be overaroused, short-tempered, irritable, anxious, and tense. They may describe themselves as having "a lot of nervous energy." "Episodic acute stress can contribute to serious illnesses like heart disease or clinical depression."[3]

STRESS STORIES

High Stress

I looked down from the top of the 300-foot cliff. I could barely see Kelly on the sandy floor below. He yelled to us, assuring us he had made it safely. Now it was my turn to rappel down the side of the cliff, but my eagerness was turning to terror.

My harness was snug and secure. The rope could easily hold someone 20 times my size. The knots were all tied for maximum safety. I was in no more danger than if I would have been standing on the edge of my kitchen table at my home.

But looking at the 300-foot drop, I didn't feel so safe. My heart raced; I could barely breathe; every muscle clenched. I was more terrified than I could remember being in decades. If anything went wrong, this would be my final day.

With Bob's help, I inched out over the edge of the cliff. There was no place to put my feet. It was empty air all the way down. I gripped the rope forcefully as my confidence in the safety of the mountain ridge gave way to complete trust in the line supporting my life. There I was, dangling at the top of a 300-foot descent.

As I started moving down the side of the cliff, I realized I wasn't going to smash and crash at the bottom. I was safe. I had total control over how slow or fast I went down.

My momentum brought my feet to connect with the vertical mountainside. So I pushed off as I let myself slide downward. I reconnected with the face of the cliff and pushed off again. Down the rope I floated. Terror had turned to exhilaration. The farther I pushed away from the cliff, the more I felt like I was flying.

Soon I reached the bottom, where Kelly made sure my landing was soft. I gave a shout of elation. What a feeling! The short moment of intense stress had transformed into extreme euphoria. I faced the fear and relished the reward.

—MO

PabloBeni/Shutterstock.com

Acute stress can be exhilarating!

Chronic stress is long-term stress resulting from those nagging problems that don't seem to go away. This is the grinding stress that can wear you down day after day, year after year. Chronic stress can result from credit card debt that keeps growing, long-term health problems, emotionally draining relationships, or staying in an unfulfilling, energy-draining job. Chronic stress can be a result of unrelenting demands and pressures that seem to never end.

The danger of chronic stress is that some people get used to it, lose hope, and give up searching for solutions. As their physical and mental resources are depleted, they are overcome by feelings of apathy, hopelessness, depression, and fear. Chronic stress can kill—through suicide, heart attacks, and violence. You will learn in later chapters that this constant, long-term stress results in stress-related disease and reduces the quality of life.

1.5 Holistic Health

Understanding Health

To understand how stress affects you, and to learn how to increase your ability to manage the demands of life, it is helpful to recognize the relationship between health and stress. Two important points about health are:

1. *Health is more than just the absence of disease.* The focus of this book is on more than just controlling stress to prevent illness and the other negative consequences of stress. The focus is on increasing your ability to deal with stress so you can enjoy optimal health and well-being, both today and in the years to come.
2. *Health relates to more than just the physical dimension*. **Holistic health** encompasses physical, mental, emotional, spiritual, and social dimensions. An imbalance in any of these dimensions will affect your health. Even broader definitions of health include occupational and environmental dimensions. In later chapters, we will discuss these last two dimensions and how they relate to stress. The important message here is that a holistically healthy person functions as a total, balanced person.

> Modern man is sick because he is not whole.
>
> —*Carl Gustav Jung*

1.6 Dimensions of Health

Figure 1.3 depicts the five dimensions of health—physical, mental, emotional, spiritual, and social.

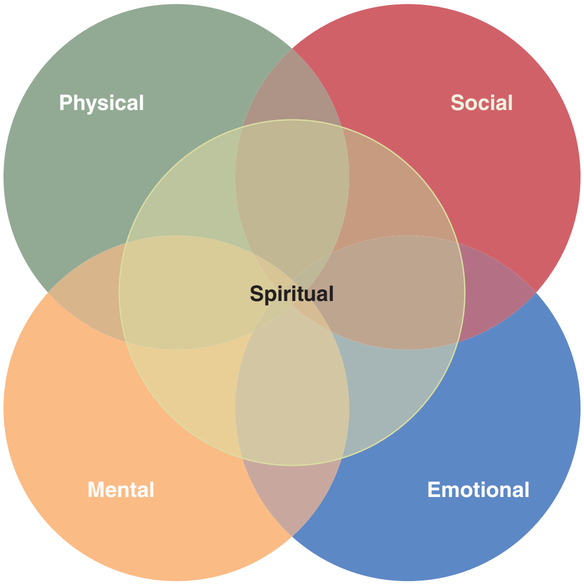


FIGURE 1.3
Dimensions of Health

Following is a brief description of each dimension of health and an explanation of how stress relates to that dimension. Understanding each of these dimensions will help you plan a more balanced approach to managing stress.

Physical Health

When the cells, tissues, organs, and systems that function together to form your body are in working order, you can claim to be in good **physical health.** You can minimize disease and injury and function optimally. Physical qualities include body weight, visual acuity, skin integrity, and level of endurance, among others. Examples of promoting health in the physical dimension are taking care of your body by eating healthy foods, exercising, getting adequate sleep, spending limited amounts of time exposed to the sun, avoiding alcohol and drugs, and getting regular health screenings.

Physical health and stress are closely related. Stress is a risk factor for many health problems that plague us today. A healthy body is better able to resist many of the damaging physiological changes that otherwise might result from excessive stress. It works both ways: Stress can cause disease and illness, and disease and illness can cause stress.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

Mental Health

Mental health, also called intellectual health, relates to the ability to think and learn from experiences, the ability to assess and question new information, and an openness to learn new things. Your mind—how and what you think—has a powerful impact on your health and well-being. In this text, you will learn about exciting new research that sheds light on the connection between the body and the mind.

Learning about stress is an essential first step in preventing and managing it. Intellectual understanding of the physical and psychological aspects of stress, along with wise decision-making skills, will allow you to process the information you learn. You will then be able to apply this information to a plan that will improve your health and well-being. In this book, you will learn a variety of stress prevention and reduction techniques. Through critical thinking and informed choice, you will decide on the tools and techniques that work best for you. Your ability to process and act on this information will strengthen the mental dimension of your health.

Emotional Health

In contrast to mental health, which encompasses thoughts and the mind, **emotional health** relates to feelings. It involves experiencing and appreciating a wide range of feelings and the ability to express feelings and emotions in healthy ways. A sign of emotional wellness is the ability to remain flexible in coping with the difficulties of life.

Stress and emotional health are strongly related. Everyone is affected by feelings such as anger, fear, happiness, worry, love, guilt, and loneliness. Emotionally healthy people use coping skills to keep from becoming overwhelmed by these feelings. Dealing successfully with stress means taking control of your emotions rather than letting your emotions take control of you.

> A man too busy to take care of his health is like a mechanic too busy to take care of his tools.
>
> —*Spanish Proverb*

Spiritual Health

Spiritual health relates to the principles and values that guide a person and give meaning, direction, and purpose to life. A conviction that life is meaningful and a belief that your life is supported by a reality greater than yourself are indications of spiritual health. Spiritually healthy people believe that their life has meaning and that they are here for a reason. The spiritual dimension may be the foundation for all other aspects of health.

Stress, especially chronic stress, often arises from a sense of aimlessness or lack of purpose. It can happen when someone feels worthless or has low self-esteem. Much stress today relates to being out of touch with our principles, values, and beliefs. Making choices that are not consistent with your core values can be stressful. For example, if you value family highly and find that the demands of work and school leave little time for family, you likely will experience grief. In later chapters, you will learn how techniques such as values clarification can contribute to spiritual peace.

Nurturing your spiritual dimension through introspection, meditation, prayer, religion, volunteer work, nature, art, or music can reduce stress and promote health. Spirituality as a critical component in stress management will be discussed in Chapter 10.

Social Health

Social health refers to the ability to relate to others and express care and concern for others. The ability to interact effectively with others, develop satisfying interpersonal relationships, and fulfill social roles is vital for social health. Relationships with others, particularly family and friends, affect social well-being. When you are socially healthy, you feel accepted by others and see yourself as an essential part of your world.

A strong social support system increases your ability to manage the demands of life. As you will learn in Chapter 13, many studies show that people who have the support of friends and family are better able to deal with life's difficulties.

Holistic Health: Putting It All Together

Lian's story in the opening vignette showed that stress affected every dimension of her health. Physically, she had trouble eating and sleeping. She developed ulcers and required medication for muscle tension. Mentally, as she became more overwhelmed by all the

Syda Productions/Shutterstock.com

The support of family and friends is vital for health in the social dimension.

demands, her grades began to drop. Emotionally, she was overwhelmed by all the pressure, was depressed, and felt like a failure. Spiritually, she began to question her purpose and meaning in life. She doubted her value as a person, saying to herself, "How can I ever be a good nurse and help other people if I can't even help myself?" Lian initially withdrew from her friends and family, cutting back on her social life so that she could study and work. She had difficulty admitting that she needed help and support from others. Table 1.1 is a summary of how stress negatively affects every dimension of health.

TABLE 1.1 Negative Effects of Stress on Each Dimension of Holistic Health

Physical	Mental	Emotional	Spiritual	Social
Muscle tension	Forgetfulness	Anxiety	Lack of meaning	Isolation
Headaches	Poor concentration	Frustration	Lack of purpose	Lashing out
Teeth grinding	Low productivity	Nervousness	Loneliness	Clamming up
Fatigue	Negative attitude	Worrying	Depression	Lowered sex drive
Insomnia	Confusion	Tension	Low self-esteem	Nagging
Backaches	No new ideas	Mood swings	Loss of self-worth	Fewer friends
Stomach problems	Lethargy	Easily discouraged	Feeling abandoned	Using people
Colds	Boredom	Crying spells	Inability to love	
Neck aches		Irritability		
Loss of sex drive		Anger		
Nausea		Hostility		
Shoulder pains		Fear		
Drug use		Burnout		

You will find in this book a toolbox of different techniques and strategies for managing stress. As you explore them all, you will figure out what works best for you.

1.7 Nature or Nurture

Everyone is unique. Genetic variations may partly explain the differences in how we react to stressors. Some people are naturally laid-back, while others react strongly at the slightest hint of chaos. Life experiences also may increase your sensitivity to stress. Strong stress reactions sometimes can be traced to early environmental factors. People who were exposed to extremely stressful events as children, such as abuse or neglect, tend to be particularly vulnerable to stress as adults.[4] There is even evidence that a mother's stress can spread to her baby while in the womb and have a lasting effect.[5]

Your unique genetic makeup, life experiences, and the environment where you grew up all play a part in your individual reactions to the inevitable stressors of life.

Stress is an individual experience representing a personalized physiological, psychological, and spiritual response to the presence of a demand. Many factors affect our experience with stress. Table 1.2 lists some of the factors influencing the impact of stress. The important point is to remember your uniqueness. Stress affects each person differently.

1.8 Sources of Stress

Nobody needs to tell you that the college years can be a time of high stress. Even though the origins and causes of stress are unique for each person, many college students face some common stressors. Each stressor will be looked at adequately in later chapters, but here are some of the most common sources of stress. Do any of these sound familiar?

Time Management

Do you have too much to do? No matter how hard you work, do you feel like you never get caught up? If you are like many people, the answer is "yes." You will learn in Chapter 11 (on time management) that we don't so much need to manage our time as we need help to manage ourselves!

Personal Expectations

Are you your most significant stressor? Do you put demands on yourself that may be unrealistic? Do you have feelings of low

TABLE 1.2 Factors Influencing the Impact of Stress

Heredity
Environment
Number of stressors
The magnitude of the stressor
The subjective meaning of the stressor
Developmental level of the individual
Availability of social support

TIME TIP

Students reported that time management is so important to stress management that they want tips in every chapter to help them develop healthy time management habits. We listened. In addition to an entire section on time management (Chapter 11), we asked students to share their proven time tips with you. Watch for these time management tips, from students to students, in every chapter.

Time Tip: "Triage ruthlessly! *Triage* is a term I learned in nursing school to describe the process of determining the priority of patient care based on the severity of their condition. This rations patient treatment efficiently when resources are insufficient for all to be treated at once. How does this relate to time management and you? **Invest your time and energy where it matters most.** You have a limited number of hours in the day. Ration your time so you spend it on your priorities. Apply triage to the things you want to accomplish today."

—Evan H.

STRESS STUDIES

Stress Can Literally Shrink Your Brain

An article published in the journal *Neurology* describes a study of 2,231 middle-aged participants in the famous Framingham Heart Study. In addition to finding a correlation between high levels of the stress hormone cortisol and memory impairment, the researchers also found via MRI scans that those with heightened cortisol had decreased brain volume.

"In our quest to understand cognitive aging, one of the factors attracting significant interest and concern is the increasing stress of modern life," says the study's senior author Dr. Sudha Seshadri in a news release. "One of the things we know in animals is that stress can lead to cognitive decline. In this study, higher morning cortisol levels in a large sample of people were associated with worse brain structure and cognition."

Seshadri, a professor of neurology at UT Health San Antonio and founding director of the university's Glenn Biggs Institute for Alzheimer's and Neurodegenerative Diseases, says the fast pace of modern life frequently triggers our flight-or-fight response. "When we are afraid, when we are threatened in any way, our cortisol levels go up," she says. "This study adds to the prevailing wisdom that it's never too early to be mindful of reducing stress."

Source: *"Stress Can Literally Shrink Your Brain, Study Finds," by C. Mckinney, retrieved November 5, 2019, from https://www.studyfinds.org/stress-can-literally-shrink-your-brain-study-finds/.*

"Circulating Cortisol and Cognitive and Structural Brain Measures: The Framingham Heart Study," by J. Echouffo-Tcheugui, S. Conner, & J. Himali et al., Neurology, *91(21) (2018): e1961–e1970.*

self-esteem or feel that your life is out of control? Do you take on more than you should? Would you be better off if you could learn to say "no" more often?

Family Expectations and Family Life

"So what are you going to do with the rest of your life?" Do you find well-intentioned family members about to drive you crazy with their desire to help you find direction in your life? Family life demands can include, among many others, balancing work, school, and family; health problems; substance abuse; sharp disagreements; loss of family members; difficulties with stepparents; homesickness; and divorce.

Employment Decisions and Finances

Do you work more so you can pay your tuition, or go even deeper in debt to have more time to study? In Chapter 12, you will learn how to manage your finances to help reduce stress caused by money (or lack of it).

Academic Demands

Where to begin? Deciding on a major, teachers who expect too much, and failing a test are just the beginning of a list of school pressures. Do the demands and pressures of school leave you feeling overwhelmed? Students report that stress is the top factor affecting their academic performance. So, school demands contribute to stress, and stress frequently results in poor academic performance, creating a stress-producing cycle. As Figure 1.4 shows, students rate stress as the number 1 factor affecting their academic performance, followed by anxiety.

Home Environment

What do you do with the "roommate from hell?" Could your home environment feel less cluttered? More Zen?

Relationships

You get a "Dear John" letter from your girlfriend back home. Your best friend meets another best friend. You are left behind when the gang goes out for an evening of fun. You're a single mom going to school, working full-time, trying to maintain a happy home.

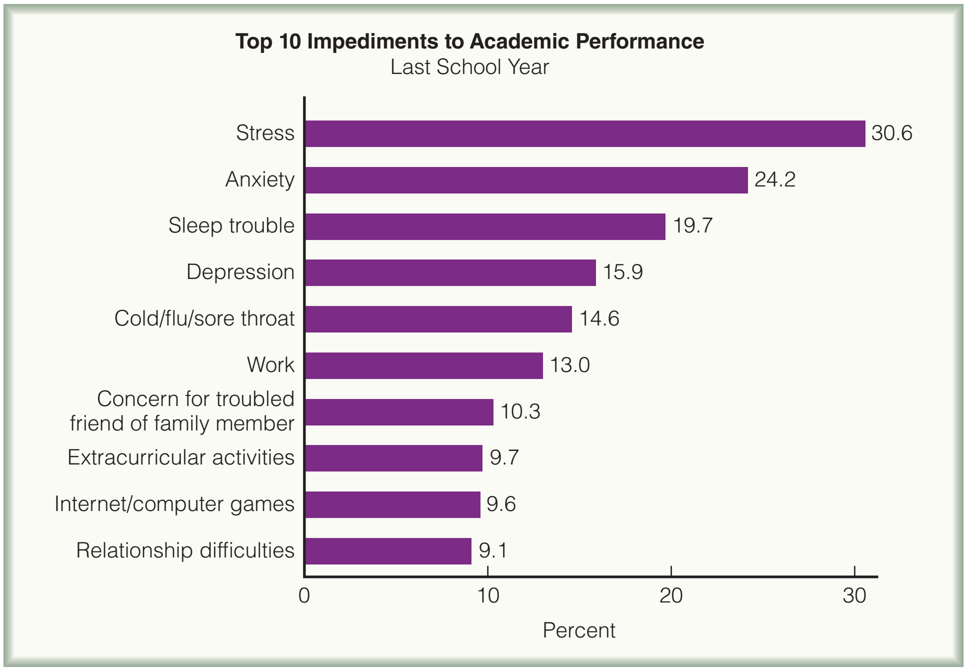


FIGURE 1.4
Top 10 Reported Impediments to Students' Academic Performance

Source: *American College Health Association-National College Health Assessment II: Reference Group Executive Summary Spring 2017. Hanover, MD: American College Health Association; 2017.*

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

CULTURE CONNECTION Life Out of Balance

Ko.yaa.nis.qatsi, n. 1. Crazy life. 2. Life in turmoil. 3. Life disintegrating. 4. Life out of balance. 5. A state of life that calls for another way of living.

Does this sound like your life? *Koyaanisqatsi* (Ko-YAWN-is-SCOTS-ee) is a Hopi Indian word that may have meaning for your life today. Consider how another way of living can improve your well-being. Throughout *Stress Management for Life,* you will find Culture Connections to offer you different perspectives on stress. Use these opportunities to step out of your box and think about things in a new way.

We become so accustomed to our way of seeing things that we quickly come to believe that everyone thinks the same way we do. Sometimes, if we pause and reflect with an open mind, we may perceive a better way. If *koyaanisqatsi* describes your life, maybe it's time to investigate a different way of living.

Source: Retrieved November 5, 2019, from https://philipglass.com/films/koyaanisqatsi/

Physical Health Issues

Just a few of the physical challenges facing college students are lack of sleep, poor nutrition, hormonal fluctuations, weight problems, and no time to exercise. Is it any wonder that colds and flu plague students, especially during finals? And what about more serious health problems such as sexually transmitted infections; drug, tobacco, and alcohol abuse; anorexia; burnout; and depression? The list goes on.

Environmental Stressors

You live with environmental stressors, including noise, crowding, traffic, weather, pollution, violence, and shootings—both on-campus and off. In the background is the never-ending threat of terrorism. Chapter 14 will teach you how you can create a more healing environment.

fizkes/iStock/Getty Images

Daily hassles can exceed our ability to cope. Do you know the feeling?

Information Overload

Never before in history have we had access to such tremendous quantities of information. Surrounded by technology and computers, you have more information available than you could have imagined two decades ago. One computer search for information on "stress in college students" yielded 510,000 results. And don't forget iPhones, Twitter, Facebook, Instagram, and e-mail. You have information coming at you 24/7. All this information has had such an impact on stress that it has been given a name: **technostress.** In Chapter 14, you will learn more about technostress and what you can do about it.

Choices

The world of today's college student is filled with options, many of them consequential. This explosion of choice reflects a pervasive social trend. Americans are overwhelmed with choices in virtually every area of life—from what products to buy (e.g., 300 kinds of cereal, 50 different cell phones, and thousands of mutual funds) to where to go for spring break and how to pay for that vacation (e.g., credit card, debit card, check, loan, or even cash).[6]

Daily Hassles

Finally, we cannot forget those hundreds of small but significant hassles that can creep into your day and put you over the edge. Lazarus[7] described **hassles** as the irritating, frustrating, or distressing incidents that happen in our everyday interactions with the environment. His research supports the idea that the petty annoyances, frustrations, and

STRESS-BUSTING BEHAVIOR

Your Sources of Stress

Consider the items that are significant sources of stress for you. Which would be your most significant source of stress?

○ Time Management
○ Personal Expectations
○ Family Expectations and Family Life
○ Employment Decisions and Finances
○ Academic Demands
○ Living Arrangements
○ Relationships
○ Physical Health Issues
○ Environmental Stressors
○ Information Overload
○ Choices
○ Daily Hassles

unpleasant surprises that plague us every day may add up to more misery than life's major stressful events.

Hassles can take the form of a flat tire, a dead cell phone, a computer crash, a toothache, a crying baby, the dog who ate your homework—the list goes on. A wise person once said, "Sometimes it is not the mountain in front of you, but the grain of sand in your shoe that brings you to your knees."[8]

Finding the sources of your stress can be an essential first step in developing a plan to reduce or eliminate it. Throughout the chapters of this book, you will find helpful information and proven strategies to help you deal with many of these familiar sources of stress.

1.9 Conclusion

The critical lesson from this chapter is to strive for balance in your life. Even though stress can occasionally be challenging and useful, it also can be chronic and excessive to the point where you no longer can adapt to and cope with the pressures. An optimal level of stress is characterized by high energy, mental alertness, high motivation, calmness under pressure, ability to clearly analyze problems, improved memory and recall, sharp perception, and an optimistic outlook.[9] In a nutshell, too much stress makes everything worse.

In *Stress Management for Life*, you will learn that you can manage and even prevent stress through the following three basic approaches:

1. *Eliminate the stressor*. By recognizing the problems that start your stress, you can sometimes change or eliminate their source.
2. *Change your thinking*. You can't always eliminate life's demands, but you do have the power to change your interpretation of the situations. You can change the way you think about them.
3. *Reduce your stress*. Sometimes our stress levels are too high. When you can't prevent stress, relaxation techniques will help you reduce its unpleasant effects.

You are about to embark on an exciting journey of discovery. You will learn about stress in your life. You will find out how stress affects you physically, emotionally, mentally, spiritually, and socially. Most importantly, you will learn how to increase your *ability* to manage the demands of today's world. You will learn how to prevent stress. You will learn how to reduce or cope successfully with the stress you can't avoid. So, what will it be for you? Will these be the best of times or the worst of times? The decision is yours. Let the journey begin.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

ACTIVITY

1.1 Dimensions of Health

DIRECTIONS Write a paper that includes your responses to the following questions relating to your dimensions of health.

Review: Consider each of the five dimensions of health. Think about how each dimension relates specifically to your stress. List two specific things you currently do in each dimension to help manage and control stress. If you have trouble producing ideas, you might consider giving extra emphasis to that dimension of your health.

1. Physical—What two things in the physical dimension of health have you found useful in managing and controlling stress?
2. Mental—What two things in the mental dimension of health have you found useful in managing and controlling stress?
3. Emotional—What two things in the emotional dimension of health have you found useful in managing and controlling stress?
4. Spiritual—What two things in the spiritual dimension of health have you found useful in managing and controlling stress?
5. Social—What two things in the social dimension of health have you found useful in managing and controlling stress?

Respond: Select one dimension of health. Plan and implement a specific action to improve your stress in that dimension. For example, you can take the following steps:

- Physical—Get up early Saturday morning and go for a long walk in nature.
- Spiritual—Spend 30 minutes in quiet prayer.
- Social—Write a letter of appreciation to someone special in your life.
- Emotional—Do something for no other reason than the fun of it—pack a picnic, watch a funny movie, or dance along to your favorite music.

You decide what would most benefit you. The important thing is that you **do** something.

1. What dimension of health did you select?
2. What was your specific action for improving your health in that dimension?

Reflect: When you have completed your actions, reflect on how you felt. Did you feel different after you conducted your activity? If so, how? Reflect on how you can attain more stress-busting moments in your life.

Key Points

- Stress is a demand upon the adaptive capacities of the mind and body.
- Eustress is the positive, desirable stress that keeps life exciting and helps to motivate and inspire.
- Distress is a negative, energy-draining form of stress.
- Stress can be acute, episodic acute, or chronic. The effects on health vary with each type of stress.
- A stressor is any event or situation that causes us to adapt or start the stress response.
- Health is more than the absence of disease.
- Health has a direct relationship to stress.
- Holistic health encompasses physical, mental, emotional, spiritual, and social dimensions. Imbalance in any of these dimensions affects overall health. Stress creates imbalances in every human dimension.
- Although each of us has different and unique sources of stress, some stressors are typical for today's college students.
- *Stress Management for Life* will provide you with tools to increase your ability to deal more effectively with the stressors of life.
- Your college years can be the best of times. The choice is yours.

Key Terms

stress
Yerkes–Dodson Principle
stressor
eustress
distress
acute stress
episodic acute stress
chronic stress
holistic health
physical health
mental health
emotional health
spiritual health
social health
koyaanisqatsi
technostress
hassles

References

1. *Managing Stress,* by D. Fontana (London, England: British Psychology Society and Routledge, Ltd., 1989).
2. "The Relation of Strength of Stimulus to Rapidity of Habit-Formation," by R. M. Yerkes & J. D. Dodson, *Journal of Comparative Neurology and Psychology, 18* (1908): 459–484.
3. "The Three Types of Stress," by T. Ehrenfeld, retrieved November 5, 2019, from https://www.psychologytoday.com/us/blog/open-gently/201812/the-three-types-stress.
4. "Effects." The National Child Traumatic Stress Network staff, retrieved November 5, 2019, from https://www.nctsn.org/what-is-child-trauma/trauma-types/complex-trauma/effects.
5. "Prenatal Stress and Enhanced Developmental Plasticity," by S. Hartman & J. Belsky, *Journal of Neural Transmission, 125* (2018): 1759–1779.
6. "The Tyranny of Choice," by B. Schwartz, *Chronicle of Higher Education*, January 23, 2004.
7. "Puzzles in the Study of Daily Hassles," by R. Lazarus, *Journal of Behavioral Medicine, 7* (1984): 375–389.
8. "Risk Factors Leading to Chronic Stress-Related Symptoms," by I. Wickramasekera, *Advances 4*(1) (1987): 21.
9. *Corporate Stress*, by R. Forbes (Garden City, NJ: Doubleday, 1979).

chapter 2

Self-Assessment

Red Chopsticks/Getty Images

A life unexamined is a life wasted.

—*Socrates*

I know I feel stressed, but how can I measure my stress?

How do I rate my stress level compared to the stress level of others?

I often have headaches and tight shoulders, but I am not sure why. Could this be due to stress?

When I feel stressed, is it more because of what is happening in my life or because of how I react or think about what is happening?

Learning Objectives

Study of this chapter will enable you to do the following:

2.1 Assess your current level of stress from a variety of perspectives.

2.2 Explain the physiological and psychological indicators of stress.

2.3 Evaluate the impact of stress on the quality of your life.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

Real People, Real Stories

Stress Happens The Stress Management 101 class was about to begin. Today's topic was "Assessing Your Stress." Angie sat quietly in the back of the classroom.

"Okay class, let's start by checking our resting heart rate," the teacher announced. Angie's pulse was 105 beats per minute.

"Next, check the number of breaths you take per minute." Angie counted 30 breaths.

"How long does it usually take you to fall asleep once you lie down at night?" Angie said she usually takes at least an hour.

"How much of the time do you feel high levels of stress?" Angie said she feels that way almost all the time.

"Doesn't it feel unpleasant always to feel so stressed?" the teacher questioned. Angie's reply, common among college students, was, "I didn't know there was another way to feel. I assumed that this was the way college life was supposed to be and that everyone feels this way."

2.1 Self-Assessment

Several years ago, author Richard Carlson created a catchy title for his best-selling book, *Don't Sweat the Small Stuff . . . and It's All Small Stuff.* He offered some valuable advice for our overstressed society: We need to step back and relax. The problem is that not all stuff is small stuff. Some things are worth sweating over. The tricky part is to figure out what is essential, what is worthy of your energy, and what constitutes the small stuff that causes needless worry and diminishes the quality of your life.

As you learned in the first chapter, a certain level of stress can energize and motivate you to deal with the important issues in your life. Too much stress makes everything worse. Are there ways that you can quickly find out if you have too much stress? How do you determine what issues cause you unnecessary stress? How does your stress level compare to others? We will help you answer these questions in this chapter.

2.2 Where Are You Now Stress-Wise?

How is stress measured? This chapter presents a variety of tools to help assess your stress. Some of these tools are simple and fun, and others are more scientific and complex. Each was selected to help you understand the stress in your life and to provide information you can use to develop a stress management plan that works for you. The first step in developing a plan is an assessment. To assess your stress, we need to use several tools, in part because reactions to events vary from person to person. What distresses one person may excite and challenge another. Additionally, external events are not usually what cause stress. How we perceive and cope with events is the determining factor.

Therefore, you should use the information in this chapter in a way that seems relevant to you and your life. These assessments and surveys are not intended to be diagnostic but only to guide you in better understanding yourself. This chapter is devoted to providing you with a variety of stress assessment tools, including the following:

- Assess Your Stress
- Symptoms of Stress
- Perceived Stress Scale
- Inventory of College Students' Recent Life Experiences
- Ardell Wellness Stress Test
- Student Stress Scale
- Stress Vulnerability Factors
- Tombstone Test
- Daily Stress Diary

Taken together, the results of these assessments will produce an overall picture of your current stress status and help you decide where you want to go and how you can get there. Starting with a comprehensive assessment is so important that we have devoted this entire chapter to help you get a picture of your current stress status.

2.3 Assess Your Stress

The first assessment tool you will use is called Assess Your Stress. The focus of this tool is on physiological indicators of stress, along with your subjective rating of stress. Using Figure 2.1, fill in your results based on the following instructions.

Resting Heart Rate

Check your resting heart rate (pulse) after you have been sitting or relaxing for at least 10 minutes. You will need a watch or clock with a second hand (or digital seconds). First, find your pulse. You can find your **radial pulse** on the thumb side of your wrist, or your **carotid pulse** on your neck just under the jaw. For 60 seconds, count the number of beats you feel. Place this number in the first line of Figure 2.1.

Breathing Pattern

Now find a chair with a back. Sit in the chair so your back is primarily straight up and down against the back of the chair. Place one hand on your stomach with your palm covering your navel. Place your other hand on the upper part of your chest with the palm of that hand just above your heart. For a minute or two, become aware of your breathing. While sitting straight up, notice your breath as it naturally goes in and comes back out. Become aware of your hands as you breathe in and out. Which hand seems to move more—the hand on your abdomen or the one on your chest? Or do both hands seem to move equally?

Try this second technique to see if you get the same results: First, breathe out and empty your lungs. Count to three as you inhale deeply. Now hold it. Did your shoulders go up? Did you feel like the air filled the upper part of your lungs? If so, you probably lean toward what we call chest breathing. By contrast, if you are a diaphragmatic breather, you will feel your abdominal area expand, your belt tighten, and fullness in the lower part of your lungs and chest. Record your results in Figure 2.1 by putting an "X" by the mode that best describes how you breathe.

FYI

Meditation Slows Breathing

Did you know that meditating can affect the way you breathe and the amount of oxygen your body needs? People who regularly practice meditation tend to have slower breathing rates and naturally breathe more efficiently; that is, their bodies use the oxygen they breathe more effectively. Various studies have shown that oxygen consumption is reduced during meditation, in some cases by up to 55%, and that respiration rate is reduced in some cases to one breath per minute, when 12 to 16 breaths per minute are typical. This natural physiological change is due to a lowered requirement for oxygen by the cells and slower metabolism, which meditation facilitates.

Respiration Rate

Next, become aware of your breathing again. This time count how many natural, effortless breaths you take in a minute. Be sure to breathe as normally and naturally as possible. Each inhalation and exhalation cycle is considered one breath. The number of breaths you take in one minute is your **respiration rate**. Using Figure 2.1, record the number of breaths you take per minute.

Stress-o-Meter

Thinking back over the last month of your life, including all your waking moments, rate yourself on the "Stress-o-Meter" along a continuum in which:

> "1" means that you feel your life was stress-free during that period. You felt blissful and calm most of the time. Everything seemed to go your way.

FIGURE 2.1
"Assess Your Stress" Form

Resting Heart Rate	____ Beats per minute
Breathing Pattern	____ Abdomen ____Chest ____ Both
Respiration Rate	____ Breaths per minute
Stress-o-Meter	1 2 3 4 5 6 7 8 9 10

ESB Basic/Shutterstock.com

An elevated heart rate is a sign of stress. One site for counting your heart rate is the carotid artery.

"10" means that you felt extremely high anxiety most of the time. This was a month packed with very high levels of stress. You felt overwhelmed—as if your life was out of control and you were unable to cope.

Considering the last month as a single period, rank yourself somewhere between these two extremes. To average out the month (we all have highs and lows), what number between 1 and 10 would you give yourself? Note this number in Figure 2.1.

Assess Your Stress Results

Physiological measures associated with increased stress include, among others, increased heart rate and increased respiration rate. Although many things affect these rates, such as physical conditioning and recent physical exertion, you will learn in Chapter 3 why the stress response can increase your pulse and respiration rates. The pulse rate for adults ranges between 50 and 100 beats per minute, with the average heart rate of approximately 65 to 80 beats per minute. The average respiration rate is 12 to 16 breaths per minute. A faster heartbeat or breathing rate might be an indicator of higher-than-desired stress levels. It could also be a sign of a medical condition, or recent physical activity such as running up the stairs to get to class.

Are you primarily a chest breather or an abdominal breather? Many of us are mainly chest, or thoracic, breathers. Chest breathing happens due to chronic activation of the stress response. Chest breathers tend to take shallower breaths with the unconscious intention of getting more air into the lungs more quickly in preparation for fighting or running.

Diaphragmatic, or abdominal, breathing uses the abdominal muscles to enable deeper breathing. This allows you to take in more oxygen with each breath. Deep breathing slows your nervous system in direct opposition to the stress response, which speeds it up. Later you will learn more about deep breathing as a relaxation technique.

Your perception of stress is instrumental in how your body responds. Results from the Stress-o-Meter increase your awareness of the level of stress you perceive in your life. When we do physical exercise, we can follow a perceived exertion scale that gives us some idea of how hard we are exercising, determining our intensity level. Similarly, we can use the Stress-o-Meter to assess our general levels of perceived stress over the past month. You will learn in an upcoming chapter how your perception of stress relates to your health and your physiological response.

Look back over the results you recorded in Figure 2.1. What does this information tell you about your stress level?

2.4 Symptoms of Stress: Assessment

How often do you experience problems such as headaches, difficulty going to sleep or staying asleep, unexplained muscle pain, jaw pain, uncontrolled anger, or frustration? Using Figure 2.2, assess how often you experience common symptoms of stress by placing an "X" in the proper box.

The more often you experience these symptoms of stress, the more likely it is that stress is impairing your life. Also, stress is not the only cause of these symptoms. Athletes, for example, may experience sore muscles from training. However, when these symptoms occur for unexplained reasons, stress must be considered as a contributing factor. Like Angie in the opening vignette, you may be so used to feeling a certain way that you assume it is normal. If you don't recognize that stress is affecting you, you can't change. Learning to be self-aware helps you discover symptoms of stress early so you can do something about them. Look again at Figure 2.2. Do you notice signs of stress in yourself that you would like to eliminate or change? In later chapters, you will learn proven strategies to help you end the negative symptoms of stress in your life.

> Nothing can bring you peace but yourself.
>
> —*Ralph Waldo Emerson*

FIGURE 2.2
Symptoms of Stress Form

Symptoms	Frequency of Symptoms						
	Almost all day, every day	2–3 times a day	Every night or day	2–3 times per week	Once a week	Once a month	Never
Headaches							
Tense muscles; sore neck and back							
Fatigue							
Anxiety, worry, phobias							
Difficulty falling asleep							
Irritability							
Insomnia							
Bouts of anger/ hostility							
Boredom, depression							
Eating too much or too little							
Diarrhea, cramps, gas, constipation							
Restlessness, itching, tics							
Grinding teeth, clenching jaw during sleep							
Difficulty concentrating							

2.5 Perceived Stress Scale (PSS)

Figure 2.3 shows the Perceived Stress Scale (PSS). This classic stress assessment instrument is still a popular choice for helping us understand how different situations affect our perceived stress. The questions in this scale ask about your feelings and thoughts over the past month. In each case, you are asked to indicate how often you felt or thought a certain way. Although some of the questions are similar, you should treat each one singly. The best approach is to answer them quickly. Don't try

STRESS STUDIES

Stress and Exercise

We know that stress affects how well we sleep and how we feel. It also affects our overall well-being. But can physical activity help buffer the adverse effects of stress on our well-being and how well we sleep? In one study, college students completed surveys at the end of the semester break—times of low stress—and every Friday in the last four weeks of the semester—times of high stress during exams. They answered questions about their stress levels, activity levels, sleep quality, overall well-being, and how they felt emotionally.

The results showed that students did experience much higher stress levels during the last four weeks of the semester compared to the end of the semester break. However, those who reported higher activity levels had lower stress levels, felt better emotionally, enjoyed better sleep quality, and experienced higher overall well-being during the stress period than those who didn't participate in physical activity. The authors concluded that "moderate-intensity activity of 150 minutes/week seems to be enough to profit from the stress-buffering and health-promoting effects."

Source: "The Effect of Physical Activity on Sleep Quality, Well-being, and Affect in Academic Stress Periods," by K. Wunsch, N. Kasten, & R. Fuchs, *Nature and Science of Sleep* 9 (2017): 117–126.

FIGURE 2.3
Perceived Stress Scale (PSS)

For each question, choose from the following alternatives:
0–Never 1–Almost never 2–Sometimes 3–Fairly often 4–Very often

____ 1.In the last month, how often have you been upset because of something that happened unexpectedly?
____ 2.In the last month, how often have you felt that you were unable to control the important things in your life?
____ 3.In the last month, how often have you felt nervous and stressed?
____ 4.In the last month, how often have you felt confident about your ability to handle your personal problems?
____ 5.In the last month, how often have you felt that things were going your way?
____ 6.In the last month, how often have you found that you could not cope with all the things that you had to do?
____ 7.In the last month, how often have you been able to control irritations in your life?
____ 8.In the last month, how often have you felt that you were on top of things?
____ 9.In the last month, how often have you been angered because of things that happened that were outside of your control?
____ 10.In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?

Figuring your PSS score:

Determine your PSS score by following these directions:
First, reverse your scores for questions 4, 5, 7, and 8. On these four questions, change the scores like this: 0 = 4, 1 = 3, 2 = 2, 3 = 1, 4 = 0.
For all other questions, use the number you wrote down as the score.
Now total your scores for each item.
My total score is ____.
Individual scores on the PSS can range from 0 to 40, with higher scores indicating higher perceived stress.
Scores ranging from 0–13 would be considered low perceived stress.
Scores ranging from 14–26 would be considered moderate perceived stress.
Scores ranging from 27–40 would be considered high perceived stress.

Source: *"A Global Measure of Perceived Stress," by S. Cohen, T. Kamarck, & R. Mermelstein, in* Journal of Health and Social Behavior, *24(4) (1983):385–396.*

to count the number of times you felt a certain way. Instead, indicate the alternative that seems like a reasonable estimate.

The Perceived Stress Scale is impressive because it considers your *perception* of the most important happenings in your life. Consider two students, Juan and Dan, who had similar life events and experiences for the past month. Juan thinks, "Well, things aren't going quite how I planned, but I am learning some good lessons, and things can only get better!" Dan thinks, "Things aren't going how I planned; everything is going downhill, my life is a mess, and I'm a loser!" Depending on their perceptions, Juan's total score could put him in the low-stress category, and Dan's total score could put him in the high-stress category.

STRESS BUSTING BEHAVIOR

Stress Level Checklist

Monitor your stress levels regularly with the following list. Notice if your answer to any question is "yes."

- ☐ Check your resting heart rate—is it higher than usual?
- ☐ Do you breathe from your chest only (rather than your abdomen)?
- ☐ Is your rate of respiration elevated?
- ☐ Is your perceived stress level above a 5 on a scale of 1 to 10?
- ☐ Do you have any other stress symptoms, such as headaches, tense muscles, or difficulty falling asleep?

If you said yes to any of the questions, it's time to take action to reduce your stress!

2.6 Inventory of College Students' Recent Life Experiences

Another useful scale that measures stress levels differently is the Inventory of College Students' Recent Life Experiences (ICSRLE), represented in Figure 2.4. The ICSRLE was designed to identify individual exposure to sources of stress or hassles. This inventory also allows you to determine the extent to which you experienced those stressors over the past month. As its name suggests, the ICSRLE was developed uniquely for college students, and as you know, the sources of stress in a university environment can be different from other settings.

FYI

Lesson from the Titanic

The blockbuster movie *Titanic* has a health lesson for us all. The captain of that mighty ship was warned six separate times to slow down, change course, and take the southern route because icebergs had been sighted. But he ignored all six specific warnings and was lulled into complacency because he believed the ship was unsinkable. The lesson is: *Listen to your body when it sends you signals*. Symptoms and changes are warnings that you should slow down, change course, or take another route.

Source: *Connections: Health Ministries Association Newsletter, "A Lesson from the Titanic," by J. Wright-Elson,* Parish Nurse Note *(Huntington Beach, CA).*

FIGURE 2.4

Inventory of College Students' Recent Life Experiences (ICSRLE)

The following is a list of experiences that many students have at some time or other. Indicate for each experience how much it has been a part of your life over the past month. Mark your answers according to the following guide:

Intensity of Experience over the Past Month

0 = Not at all part of my life
1 = Only slightly part of my life
2 = Distinctly part of my life
3 = Very much part of my life

____ 1. Conflicts with boyfriend's/girlfriend's/spouse's family
____ 2. Being let down or disappointed by friends
____ 3. Conflict with professor(s)
____ 4. Social rejection
____ 5. Too many things to do at once
____ 6. Being taken for granted
____ 7. Financial conflicts with family members
____ 8. Having your trust betrayed by a friend
____ 9. Separation from people you care about
____ 10. Having your contributions overlooked
____ 11. Struggling to meet your own academic standards
____ 12. Being taken advantage of
____ 13. Not enough leisure time
____ 14. Struggling to meet the academic standards of others
____ 15. Many responsibilities
____ 16. Dissatisfaction with school
____ 17. Decisions about intimate relationship(s)
____ 18. Not enough time to meet your obligations
____ 19. Dissatisfaction with your mathematical ability
____ 20. Important decisions about your future career
____ 21. Financial burdens
____ 22. Dissatisfaction with your reading ability
____ 23. Important decisions about your education
____ 24. Loneliness
____ 25. Lower grades than you hoped for
____ 26. Conflict with teaching assistant(s)
____ 27. Not enough time for sleep
____ 28. Conflicts with your family
____ 29. Heavy demands from extracurricular activities
____ 30. Finding courses too demanding
____ 31. Conflicts with friends
____ 32. Hard effort to get ahead
____ 33. Poor health of a friend
____ 34. Disliking your studies
____ 35. Getting "ripped off" or cheated in the purchase of services
____ 36. Social conflicts over smoking
____ 37. Difficulties with transportation
____ 38. Disliking fellow student(s)
____ 39. Conflicts with boyfriend/girlfriend/spouse
____ 40. Dissatisfaction with your ability at written expression
____ 41. Interruptions of your schoolwork
____ 42. Social isolation
____ 43. Long waits to get service (at banks, stores, etc.)
____ 44. Being ignored
____ 45. Dissatisfaction with your physical appearance
____ 46. Finding course(s) uninteresting
____ 47. Gossip concerning someone you care about
____ 48. Failing to get expected job
____ 49. Dissatisfaction with your athletic skills

Scoring the ICSRLE

Add your total points: ____

Your score on the ICSRLE can range from 0 to 147. Higher scores indicate higher levels of exposure to hassles. From your results, focus on two key outcomes:

1. Determine your current level of stress by totaling your scores for each hassle.
2. Discover which hassles play a greater part in your life. Items that you rated "3" indicate that those stressors are more of an issue for you.

Source: *"The Inventory of College Students Recent Life Experiences: A Decontaminated Hassles Scale for a Special Population," by P.M. Kohn, K. Lafreniere, & M. Gurevich,* Journal of Behavioral Medicine, *13(6) (1990):619–630.*

2.7 Ardell Wellness Stress Test

Don Ardell developed a stress assessment that is unique in its holistic approach. In Chapter 1, you learned about the importance of incorporating all dimensions of health in your understanding of stress. The Ardell Wellness Stress Test, represented in Figure 2.5, includes physical, mental, emotional, spiritual, and social aspects of health for a balanced assessment. While this assessment is not as scientific as others, it supplies useful information in figuring out your current stress status puzzle. Your perception of satisfaction in factors related to body, mind, and spirit significantly affects your quality of life.

FIGURE 2.5

Adapted Ardell Wellness Stress Test for College Students

This assessment is based on your personal perception of satisfaction. Rate your satisfaction with each of the following items by using this scale:

+3 = Ecstatic +2 = Very happy +1 = Mildly happy 0 = Indifferent
−1 = Mildly disappointed −2 = Very disappointed −3 = Completely dismayed

____ 1. Choice of college
____ 2. Choice of major, area of study
____ 3. Marital or relationship status
____ 4. Friendships
____ 5. Capacity to have fun
____ 6. Amount of fun experienced in the last month
____ 7. Financial prospects
____ 8. Current ability to meet expenses
____ 9. Spirituality
____ 10. Level of self-esteem
____ 11. Prospects for having impact on those who know you and possibly others
____ 12. Sex life
____ 13. Body—how it looks and performs
____ 14. Relationship with family
____ 15. Happiness with current living situation
____ 16. Learned stress management capacities
____ 17. Nutrition, health, and fitness choices
____ 18. Life skills and knowledge of issues and facts related to your studies or future career
____ 19. Ability to recover from disappointment, hurts, setbacks, and tragedies
____ 20. Confidence that you currently are, or will be in the future, reasonably close to your highest potential
____ 21. Achievement of a rounded or balanced quality in your life
____ 22. A sense that life for you is on an upward curve, getting better and fuller all the time
____ 23. Level of participation in issues and concerns beyond your immediate interest
____ 24. Role in some kind of network of friends, relatives, and/or others about whom you care deeply and who reciprocate that commitment to you
____ 25. Emotional acceptance of the changes the passage of time brings

Total____

Interpretation

+51 to +75	You are a self-actualized person, nearly immune from the ravages of stress. There are few, if any, challenges likely to distract you from a sense of near-total well-being.
+25 to +50	You have mastered the wellness approach to life and can deal creatively and efficiently with events and circumstances.
+1 to +24	You are a wellness-oriented person, with an ability to prosper as a whole person, but you should give a bit more attention to optimal health concepts and skill-building.
0 to −24	You are a candidate for additional training in how to deal with stress. A sudden increase in potentially negative events and circumstances could cause a severe emotional setback.
−25 to −50	You are a candidate for counseling. You are either too pessimistic or have severe problems in dealing with stress.
−51 to −75	You are a candidate for major psychological care with virtually no capacity for coping with life's problems.

Source: High-Level Wellness: An Alternative to Doctors, Drugs, and Disease, *by D. Ardell (Berkeley, CA: Ten Speed Press, an imprint of the Crown Publishing Group, a division of Random House, Inc., 1986).*

When you have completed the Ardell Wellness Stress Test, review it and note which items relate most to physical health, mental health, emotional health, spiritual health, or social health. Do you detect any patterns? For instance, are more areas of disappointment related to physical health than to social health? Again, for holistic health, seek a balance in all dimensions of wellness.

2.8 Student Stress Scale

The Student Stress Scale (Figure 2.6) is an adaptation specifically for college-age students of the Life Events Scale developed by Holmes and Rahe.[1] This classic stress assessment was designed to predict the likelihood of disease and illness following exposure to stressful life events. In the assessment, each life event is given a score showing the amount of readjustment a person must make because of the change. Events that are potentially both positive and negative are included, based on the premise that adaptation to change is the contributing factor to disease and illness. Some studies have found that people with serious illnesses tend to have higher scores on similar assessments.[2]

This scale indicates that change in one's life requires effort to adapt and subsequent effort to regain stability. Stress is a natural by-product of adapting and then restoring internal homeostasis, or balance. Note that this assessment considers only life events themselves, not individual perceptions of these events. Students often point out, for example, that changing colleges or getting a new boyfriend or girlfriend can be stress-relieving, depending on the circumstances. Change, however, does require adaptation. The value assigned to each life event can be interpreted as being the amount of energy it takes to cope with any given change. Thus, the value in the Student Stress Scale is increasing your awareness of potential stress-producing events and helping you understand the connection between change and health.

2.9 Stress Vulnerability Factors

Do you think some people are just more vulnerable to the effects of stressors than others? Assessing your vulnerability to stress is another important aspect in understanding your stress experience. Vulnerability has to do with a factor, or set of factors, that increases a person's susceptibility to stress. People with low vulnerability need to experience more stress before they become distressed, while people with high vulnerability need much less stress to reach their tipping point. So, what causes the differences in people's vulnerability? What makes one person more vulnerable than another? Researchers have determined a few factors that affect vulnerability, including the following:

- **Genetics**–Evidence from family studies, particularly studies involving twins, seems to show a genetic element. One aspect of a person's vulnerability is related to his or her genetic makeup. However, this is not the whole story.

- **Coping style**–Some methods of coping with life's difficulties seem to be more effective than others. People who use effective coping skills seem to deal with stress better than those who do not. These skills can include everything from managing your time and money to breathing correctly. You will be learning many of these effective coping strategies.

- **Thinking style**–How people think about themselves or the world around them seems to make a significant difference in their level of vulnerability to stress. This is more than merely being optimistic or pessimistic. As you will learn, specific ways of thinking help some people to cope better than others.

- **Environment**–The way that people deal with stress, and the options they have, are often related to their environment. This can include anything from a cluttered house to constant noise.

TIME TIP

"Since I started school, I could not live without a planner. Writing down the daily things I need to do helps so much with prioritizing and planning out the week. I don't just write school assignments in it. I make sure to write down everything I need to get done, even if it's just something like doing the laundry. It boosts my self-esteem as well when I get to check something off."

—Rayna M.

FIGURE 2.6
Student Stress Scale

For each event that occurred in your life within the past year, record the corresponding score. If an event occurred more than once, multiply the score for that event by the number of times the event occurred and record that score. Total all the scores.

Life Event	Mean Value
1. Death of a close family member	100
2. Death of a close friend	73
3. Divorce of parents	65
4. Jail term	63
5. Major personal injury or illness	63
6. Marriage	58
7. Getting fired from a job	50
8. Failing an important course	47
9. Change in the health of a family member	45
10. Pregnancy	45
11. Sex problems	44
12. Serious argument with a close friend	40
13. Change in financial status	39
14. Change of academic major	39
15. Trouble with parents	39
16. New girlfriend or boyfriend	37
17. Increase in workload at school	37
18. Outstanding personal achievement	36
19. First quarter/semester in college	36
20. Change in living conditions	31
21. Serious argument with an instructor	30
22. Getting lower grades than expected	29
23. Change in sleeping habits	29
24. Change in social activities	29
25. Change in eating habits	28
26. Chronic car trouble	26
27. Change in number of family get-togethers	26
28. Too many missed classes	25
29. Changing colleges	24
30. Dropping more than one class	23
31. Minor traffic violations	20
Total Stress Score	

Score Interpretation:

Researchers determined that if your total score is:

300 or more—statistically, you stand an almost 80% chance of getting sick in the near future.

150 to 299—you have a 50/50 chance of experiencing a serious health change within two years.

149 or less—you have about a 30% chance of a serious health change.

Source: Health Awareness Through Self-Discovery, *by K. Mullen & G. Costello (Minneapolis, MN: Burgess Publishing Company, 1981).*

In Chapter 14, you will learn how you can create a healthy environment to reduce your vulnerability to stress.

- **Social skills**–The more integrated people are in society, and the more social support they experience, the less vulnerable they are to stress. The better a person's social skills, the easier it is for him or her to give and receive help. People with more supportive relationships tend to do better in times of crisis.[3]

The Stress Vulnerability Questionnaire (Figure 2.7) helps you evaluate some of the physical, mental, emotional, spiritual, and social factors that affect your vulnerability to stress, providing you with another piece of your stress status puzzle. Throughout this book, you will learn many new skills to aid you in reducing your stress vulnerability.

2.10 Tombstone Test

When all is said and done, one of the most valuable assessments may be what we call the Tombstone Test. How do you want to be remembered? As being a workaholic? As the one who always won the argument? For making more money than your neighbor? As someone who never forgave anyone who wronged you? Or do you want to be remembered as a good parent, partner, and friend? Do you want to be remembered as someone who was whole and balanced in body, mind, and spirit? Do you want to be remembered for the service you provided to those who needed help?

Take a few minutes to write down how you want to be remembered. What do you want others to say and think about you when your life is over? List the qualities and characteristics for which you want to be remembered. Do you live your life in a way that shows the qualities you value?

The choices you make every day determine your stress to a considerable extent. Your daily activities, which at times can feel like drudgery, can become stress-relieving when you view them all as part of your contribution to bigger priorities. Thinking about today, this minute, and the task at hand, in a positive manner, can bring peace and contentment. As the story goes, two people are laying bricks. A passerby asks, "What are you doing?" The first worker answers, "Laying bricks." The other worker answers, "Building a cathedral."

Assess what is most important in your life. When your choices are guided by the values and goals that are most important to you, your life can be full and active, yet not stressful. Decide how you want to be remembered—and then live your life so that happens.

2.11 Daily Stress Diary

You have likely completed a food diary at some time. For a few days, you record everything you eat to increase your awareness of your food choices. The information you enter can be analyzed for its caloric level and nutritional content, and thereby can help you evaluate your diet. The Daily Stress Diary serves a similar monitoring purpose. You will find it worth your time to complete the Stress Diary Activity at the end of the chapter.

The Stress Diary can be a real revelation as you become aware of stress triggers throughout your day. Watch for patterns that develop. Does your stress level increase very quickly every time your roommate's boyfriend comes over and plops himself down in your favorite chair? Do you invariably feel stressed after you and your friend consume an

iko/Shutterstock.com

How others see you affects how you feel about yourself.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

FIGURE 2.7

Stress Vulnerability Questionnaire

This stress vulnerability questionnaire helps you determine your current vulnerability to stress and helps you identify areas where you can reduce your vulnerability to stress.

Item	Strongly Agree	Mildly Agree	Mildly Disagree	Strongly Disagree
1. I try to incorporate as much physical activity* as possible in my daily schedule.	1	2	3	4
2. I exercise aerobically 20 minutes or more at least three times per week.	1	2	3	4
3. I regularly sleep 7 to 8 hours per night.	1	2	3	4
4. I take my time eating at least one hot, balanced meal a day.	1	2	3	4
5. I drink fewer than two cups of coffee (or equivalent) per day.	1	2	3	4
6. I am at recommended body weight.	1	2	3	4
7. I enjoy good health.	1	2	3	4
8. I do not use tobacco in any form.	1	2	3	4
9. I limit my alcohol intake to no more than one drink for women or two drinks for men per day.	1	2	3	4
10. I do not use hard drugs.	1	2	3	4
11. I have someone I love, trust, and can rely on for help if I have a problem or need to make an essential decision.	1	2	3	4
12. There is love in my family.	1	2	3	4
13. I routinely give and receive affection.	1	2	3	4
14. I have close personal relationships with other people who provide me with a sense of emotional security.	1	2	3	4
15. There are people close by whom I can turn to for guidance in times of stress.	1	2	3	4
16. I can speak openly about feelings, emotions, and problems with people I trust.	1	2	3	4
17. Other people rely on me for help.	1	2	3	4
18. I am able to keep my feelings of anger and hostility under control.	1	2	3	4
19. I have a network of friends who enjoy the same social activities I do.	1	2	3	4
20. I take time to do something fun at least once a week.	1	2	3	4
21. My religious beliefs provide guidance and strength to my life.	1	2	3	4
22. I often provide service to others.	1	2	3	4
23. I enjoy my job (major or school).	1	2	3	4
24. I am a competent worker.	1	2	3	4
25. I get along well with coworkers (or students).	1	2	3	4
26. My income is sufficient for my needs.	1	2	3	4
27. I manage time adequately.	1	2	3	4
28. I have learned to say "no" to additional commitments when I am already pressed for time.	1	2	3	4
29. I take daily quiet time for myself.	1	2	3	4
30. I practice stress management as needed.	1	2	3	4

*Walk instead of driving, avoid escalators and elevators, or walk to nearby offices, homes, and stores.

Total points: ☐

Rating:

0–30 points	Excellent (great resistance to stress)
31–40 points	Good (little vulnerability to stress)
41–50 points	Average (somewhat vulnerable to stress)
51–60 points	Fair (vulnerable to stress)
≥61 points	Poor (highly vulnerable to stress)

Source: Lifetime Physical Fitness and Wellness, *13th ed., by W. K. Hoeger and S. A. Hoeger (Stamford, CT: Cengage Learning, 2015, p. 414).*

entire family-sized pizza? Do you find that the days that seem filled with stress, and the days on which you seem more vulnerable to stress, are the days after you stay up late for the all-you-can-drink specials at the bar?

2.12 Conclusion

In this chapter, you used several different instruments to measure your stress. Look back over each of the assessment activities, surveys, and tools. You will see that they measure stress from a variety of perspectives, including the following:

- Physiological indicators of stress
- Your perception of what is happening in your life
- Sources of stress and the frequency of hassles
- Your level of satisfaction with the events in your life
- Life events you have experienced
- Your vulnerability to stress

The real impact of this chapter will come from what you do with the information you learned about yourself. Each assessment is like a puzzle piece: When you put all the pieces together, you have a complete picture, which you can translate into a plan to help reduce stress and enhance the quality of your life.

ACTIVITY

2.1 Daily Stress Diary

ACTIVITY Each stress assessment in this chapter provides you with the information you can use to understand the impact of stress on your life better. The Daily Stress Diary offers an added opportunity to assess your personal routine and the situations you encounter daily. For one day, keep a diary.

I. Throughout the day, list situations or events that start the stress response (sources of stress). For each event include:

1. Source of stress
2. Time and place
3. Level of perceived stress (1 = Slight, 2 = Moderate, 3 = Strong, 4 = Intense)
4. Thoughts and feelings about the stressor
5. Coping strategies you used to deal with the stressor

II. At the end of the day, reflect on:

1. What was your major source of stress for the day?
2. What is your personal assessment of how you managed stress today?

ACTIVITY

2.2 Stress Profile

You have completed several stress assessments designed to provide you with a comprehensive evaluation of your current stress status. Compile your results for each assessment by completing a paper that includes the following information.

I. Assessment Results

1. **Assess Your Stress**

   Resting Heart Rate ________ Beats per Minute

   Breathing Pattern ________ Abdomen ________ Chest ________ Both

   Respiration Rate ________ Breaths per Minute

   Stress-o-Meter 1 2 3 4 5 6 7 8 9 10

2. **Symptoms of Stress**

   What are the three symptoms of stress I experience most often?

3. **Perceived Stress Scale**

   My total score is ________. This puts me in the ________ (low, moderate, high) perceived stress range.

4. **Inventory of College Students' Recent Life Experiences**

   My total score is ________.

   List the hassles that I rated "3."

5. **Ardell Wellness Stress Test**

   My score is ________.

   What does the interpretation of my score tell me about my stress?

6. **Student Stress Scale**

   My total score is ________.

   Based on my score, my chances of experiencing a stress-related health change in the near future is ________%.

7. **Vulnerability Questionnaire**

   My total score is ________.

   What are the top three behaviors I would like to change to decrease my vulnerability to stress?

   Tombstone Test

   What are the top three qualities or characteristics for which I want to be remembered?

8. **Tombstone Test**

   What are the top three qualities or characteristics for which I want to be remembered?

II. Analysis of Results

1. Based on the eight assessments, briefly answer the following questions:
   a. What aspect(s) of stress did the assessment measure; in other words, what is the specific purpose of this assessment as compared to others? What unique information does it provide?
   b. What did you learn from each assessment? Did the results surprise you? Do you agree or disagree with the results?
2. Which three assessments were most relevant and valuable to you? Why?
3. Reflect on the overall picture of your current stress status. Give this some careful thought as you reflect on what you learned about yourself from this comprehensive assessment of many measurements of stress. This information is important for you to understand if you are to move toward a more balanced, less stressed life. What three significant insights or ideas did you gain from completing this assignment?

Key Points

- The first step in developing a plan to reduce and manage stress is an assessment.
- Stress can trigger physiological changes such as increased pulse and increased respiration rate.
- Physical symptoms of stress can include headache, muscle tension, insomnia, and a host of other stress-related symptoms.
- When assessing stress, perception is vital. The same situation can elicit quite different stress responses in different individuals because of each individual's *perception* of the experience.
- Another way to measure stress is to evaluate the frequency of exposure to different stressors and hassles.
- Several factors affect your vulnerability to stressors. Successfully managing these factors can help you become less susceptible to the harmful effects of stress.
- A Daily Stress Diary can be a valuable tool for increasing your awareness of stressors in your life.
- Because no single survey or tool can provide the whole picture when it comes to assessing stress, the results from several assessments are needed to give you a better understanding of your stress level.

Key Terms

radial pulse

carotid pulse

respiration rate

References

1. "The Social Readjustment Rating Scale," by T. H. Holmes & R. H. Rahe, *Journal of Psychosomatic Research, 11* (1967): 213–218.
2. "Effects of Stress on Students' Physical and Mental Health and Academic Success," by N. L. Shanker & C. L. Park, *International Journal of School & Educational Psychology, 4(1)* (2016): 5–9.
3. "Social Modulation of Stress Responses," by A. C. DeVries, E. R. Glasper, & C. E. Detillion, *Physiology & Behavior, 79*(3) (2003): 399–407.

chapter 3

The Science of Stress

Why do I need to understand the *science* of stress? I just want to learn to relax.

What is the purpose of the fight-or-flight response?

What really happens in my body when I feel stress?

Is the physiological response to stress different in males and females?

© Jeff Cameron Collingwood/Shutterstock.com

> To understand the stress response, we must possess a fundamental knowledge not only of psychology but of physiology as well.
>
> —*George Everly*

Learning Objectives

Study of this chapter will enable you to do the following:

3.1 Describe the human fight-or-flight response.

3.2 List the physiological changes associated with the stress response.

3.3 Name the stages of the general adaptation syndrome.

3.4 Explain how the science of stress relates to stress management and prevention.

Real People, Real Stories

Superwoman Have you ever heard stories of people displaying almost superhuman powers when confronted with an emergency? How can we explain this superhuman response that releases power and strength beyond anything we have imagined or experienced previously? What physical and psychological factors cause these fantastic abilities? Here is a true story that Sarah shared in class.

One summer night, she was out camping at the lake with some friends. They were having a great time laughing and hanging out around the campfire. Some of them were drinking and, as the night went on, a couple of guys decided to drive into town to make a beer run. One of Sarah's friends, Dave, hopped in the car and backed out of the campsite. He stopped when he realized he had run over something, but thinking it was a log from the fire, he kept backing up. He slammed on the brakes when he heard the screams from his friends to stop the car. Dave had run over one of their friends, who was trapped under the front tire. In a moment of panic, Sarah and a friend rushed over and lifted the heavy car while their friend was pulled out. This was a feat way beyond their reasonable limits. Sarah's fight-or-flight response saved a life that night.

3.1 The Science of Stress

Just mention *stress* and everyone groans. Too much stress just does not feel right. The story of stress is a long one, beginning with our ancestors many generations ago. Throughout history, people have experienced stress related to everything from war to poverty to disease to money. The quest for understanding stress has resulted in a surge of research during the past half-century. More is known about the physiology and psychology of stress than ever before.

This chapter and the next provide a scientific foundation built on principles, theories, and models of stress to help you understand the physiology and psychology of stress. In keeping with the experiential focus of this book, the intent of this chapter is not to teach you everything there is to know about the physiology of stress. Entire books have been written on this subject. The purpose of this chapter is to provide you with enough knowledge to understand how stress affects your body.

Discovering what happens in your body and your mind will help you understand the mechanics behind the stress-prevention and stress-reduction skills you will be learning. Knowledge of the science and theory of stress supplies robust and credible support for why and how stress-management techniques work.

3.2 Stress and the Big Bear

Why do you feel stress in the first place? What is the purpose of this complex interaction among nerves, hormones, muscles, organs, and body systems that leads to unpleasant symptoms such as headaches, fatigue, feeling emotionally upset, and a host of other side effects? To answer these questions, we must go back several thousand years to see what life was like for our ancestors. This will help us understand how our bodies are programmed to respond to threats and dangers today.

Consider the following scenario: Imagine that you and I live in a remote place many thousands of years ago, where we find no trace of modern conveniences. We do not have comfortable homes, smartphones or television, indoor plumbing, electricity, or any of our modern-day comforts. For the sake of this story, let's say we live in caves that are out in the "wilds" of some remote area.

I have invited you to my dwelling because we just killed a large animal and are roasting it in a pit. Several of our friends are here with us, enjoying some relaxing time together after the hunt.

Suddenly we notice a rustling of bushes in the distance. Then, charging mightily—or hungrily—toward us appears a huge, ferocious bear. This massive creature has smelled our food and wants some of it for itself. It is a menacing creature that could quickly put us out of commission with a single swipe of its mighty paws.

***

As you imagine yourself in this scenario, one of the *first thoughts* that likely will pop into your mind sounds something like: "Uh-oh! I'm in trouble here!" or "My life is in danger, and I'm likely to feel some pain!" These instant thoughts are followed closely by the next thought: *"Run!"* You sense the immediate need to get away from this dangerous animal. You don't want to be its dinner. Or your next thought could be, instead, "I need to kill this beast to protect my family, myself, and my friends! *Fight!*"

3.3 The Fight-or-Flight Response

Immediately following the first awareness of danger, a surge of physiological processes floods the body automatically and precisely. This is a state of physiological and psychological hyperarousal. The cascade of nervous system activity and release of stress hormones cause immediate physiological responses that help a person deal with or avoid danger by either fighting or running.

Harvard physiologist Walter Cannon coined the term **fight-or-flight response** to describe the body's automatic response anytime we perceive a threat or danger. This primitive response gives us extra strength, power, and speed to avoid physical harm. As you read in Sarah's story in the opening vignette, the fight-or-flight response can be activated to protect both others and us when we perceive danger.

The fight-or-flight response is designed to help us do one thing, and only one thing: *survive physical danger!* Physiologically, the stress response is characterized by activation of the sympathetic nervous system, which results in the secretion of chemicals into the bloodstream, mobilizing the behavioral response. Whether the reaction culminates in "fight" or "flight" depends on whether we perceive the threat or stressor as surmountable or insurmountable. Consequently, a stress response that works as it is designed is essential to survival. Figure 3.1 illustrates the fight-or-flight response.

Because we are designed for survival, our body systems react to protect us from pain and death in life-threatening or dangerous situations. In the short run, this response is a powerful and useful process.

Scientists use the term **homeostasis** (*homeo* = the same; *stasis* = standing) to define the physiological and emotional boundaries at which the body functions efficiently and comfortably. Stress disturbs homeostasis by creating a state of imbalance. When we are in homeostasis, we are in a state of balance. We disrupt the balance when something happens in our surroundings—something equivalent to a bear rampaging out of the forest. This perception of danger automatically activates the fight-or-flight response.

Once we sense no more danger, we experience exhaustion and fatigue because we have spent a tremendous amount of energy while running or fighting. We are exhausted, and the stress response is no longer activated. Because we feel safe again, the functions in the body that activate the stress response switch off, and we soon return to normal (homeostasis).

The fight-or-flight response is regarded as the perfect human response to stressful situations. The tend-and-befriend theory, as explained in the Culture Connection, provides

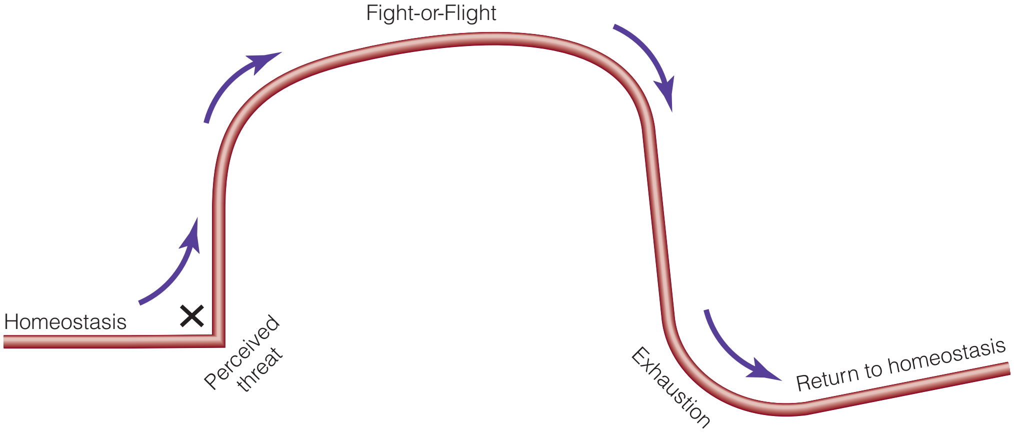


FIGURE 3.1
Fight-or-Flight Response

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

CULTURE CONNECTION

Tend-and-Befriend, Not Fight-or-Flight

Is the stress response different for men and women? If so, is the difference a result of cultural influences and learned behavior, basic physiology, or both? For the last six decades, the fight-or-flight theory has dominated stress research. Our understanding of how the body responds to stressors has increased dramatically during this time. Note that the biobehavioral fight-or-flight theory has been disproportionately based on studies of males. This is attributable in part to the fact that females experience natural, cyclical variations in hormonal and neuroendocrine responses, which can lead to confusing results. Therefore, the processes involved in stress responses in females are less well understood.

A team of scientists supported by the National Institute of Mental Health formulated a theory that characterizes female responses to stress by a pattern it terms **tend-and-befriend,** rather than fight-or-flight. This research supports the premise that the female stress response has evolved selectively to maximize the survival of self and offspring simultaneously. Women respond to stress with brain chemicals that encourage them to tend and befriend other women. Thus, the tend-and-befriend pattern involves females nurturing families under stressful circumstances, exhibiting behaviors that protect their family from harm (tending), and befriending (creating and joining social groups to exchange resources and provide protection). The scientists propose that these responses build on the biobehavioral attachment–caregiving processes that depend in part on oxytocin, estrogen, and other sex-linked hormones.

Also, the literature on human and nonhuman primates provides evidence that, unlike males, when females are under stress their preference is to affiliate, meaning to make close connections with others. This research might also help explain why women outlive men. Female friendships may help women live longer. Research is solid that social ties reduce women's risk of disease by lowering blood pressure and heart rate. The tend-and-befriend pattern is supported by social and cultural roles, in addition to sex-linked, neuroendocrine responses to stress. This theoretical model opens a fresh field of inquiry into research on stress.

Source: "Tend and Befriend Theory," by S. Taylor, in P. A. M. Van Lange, A. W. Kruglanski, & E. T. Higgins (Eds.), *Handbook of Theories of Social Psychology* (Thousand Oaks, CA: Sage Publications Ltd) (2012): 32-49.

some intriguing food for thought by proposing that the stress response may be different in men and women. While this research is still in the preliminary stages, it appears that, physiologically, women also have a life-saving tendency of joining together for mutual support when confronted with stress.

Although we know that there may be some differences in how males and females respond to stress physiologically, we also know that the male and female responses have many similarities. The fight-or-flight response explains most clearly the chain of events that occurs in response to stress.

3.4 Physiological Response to Stress

When the stress response is activated, immediate and powerful changes come about because a branch of the nervous system called the **autonomic nervous system** (ANS) is activated. The ANS handles many functions in the body that typically occur involuntarily, such as digestion, heart rate, blood pressure, and body temperature. The activity of the autonomic nervous system takes place primarily beyond our conscious control. It is automatic.

The following two branches of the ANS are designed to regulate the fight-or-flight response continuously:

1. The **sympathetic nervous system** (SNS) is the part of the ANS responsible for starting the fight-or-flight response each time we sense potential or actual danger or pain. Anytime we think we are in danger, whether we really are or not, the flood of physiological and emotional activity is turned on to increase our power, speed, and strength.
2. The **parasympathetic nervous system** (PNS), the other branch of the ANS, is designed to return the physiology to a state of homeostasis, or balance, after the threat, danger, or potential pain is no longer perceived to be imminent. The parasympathetic branch handles counterbalancing the body's sympathetic activity, which restores calm, promotes relaxation, and facilitates digestive functions, energy storage, and tissue repair and growth.[1] Breathing is slow, as is the heart rate; blood pressure and body temperature drop. In general, muscle tension decreases. During parasympathetic activity (general relaxation), the body regenerates and restores for future action.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

The autonomic nervous system is controlled by the **hypothalamus,** found in the **diencephalon** area of the brain. The diencephalon is the central part of the brain that, among other things, regulates emotions. The hypothalamus plays a vital role in the stress response because it is the central region for coordinating sympathetic and parasympathetic activities. When the hypothalamus receives the message of danger from the higher-order thinking part of the brain, an alarm system goes off deep in the brain, delivering a message through the nervous system that connects to every other body system.

The hypothalamus also delivers a message to the endocrine system to start the secretion of hormones. The stress hormones, including epinephrine and cortisol, flood the bloodstream and travel throughout the body, delivering information to all of the cells and systems to make it more speedy and powerful, as demonstrated in Sarah's story in the opening vignette.

These stress hormones are produced by the **adrenal glands,** two triangle-shaped glands positioned on top of the kidneys. **Epinephrine** (adrenaline) and **norepinephrine** (noradrenaline) are released into the bloodstream from the **adrenal medulla. Cortisol,** the other essential stress hormone, is released from a part of the adrenal glands called the **adrenal cortex.** Together, these hormones flood every cell in the body with the specific message to prepare for the fight-or-flight response—for more power and speed—when we are faced with an imminent threat. The dual response of the nervous and endocrine systems are the beginning of the stress response. In an instant, with the interpretation of a stimulus as potentially threatening, your body leaps into alert mode. This reaction gave early humans the energy to fight aggressors or run from predators, helping the species survive.

Consider this scenario:

> A dry twig in the jungle snaps, and our common ancestor—your father, my father, 1,500 generations ago—leaps into alert mode. Adrenaline floods his system, causing lipid cells to squirt fatty acids into his bloodstream for quick energy. His breathing becomes shallow and rapid, and his heart beats faster, increasing the flow of oxygen to his muscles, enhancing his strength and speed. His blood vessels constrict, minimizing bleeding if he's injured, and his body releases natural coagulants and painkillers. His sweat glands open, leaving his skin slippery and hard for a predator to grasp. His hair stands on end, making him appear larger and more threatening. His pupils dilate, increasing his ability to scan dark jungle terrain. All this happens in less than a second, and—zip—Dad's off and running, far enough ahead of the tiger to ensure that your bloodline, and mine, make it to the next generation.[2]

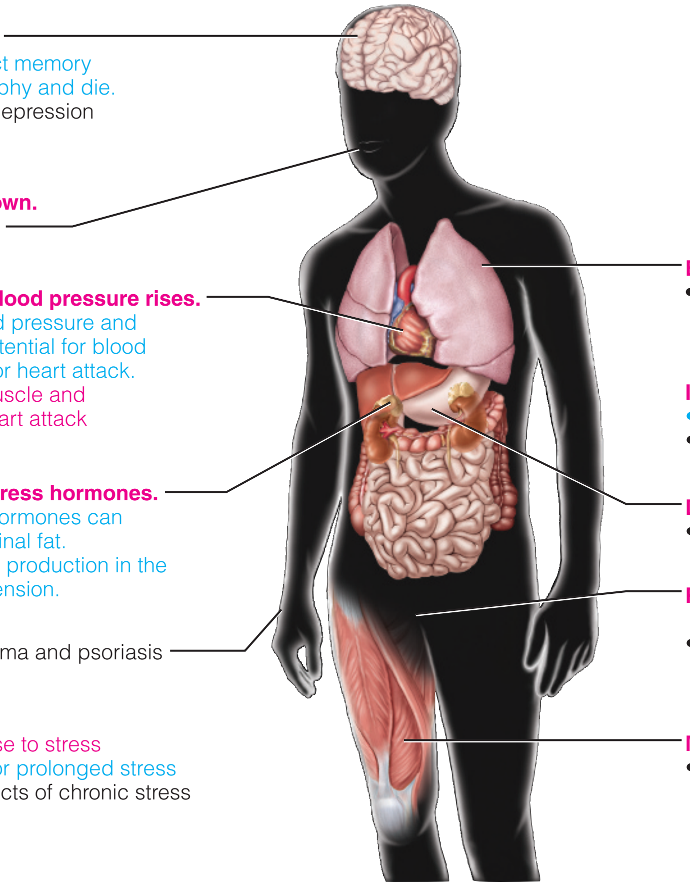
This scenario describes some of the physiological changes that prepare the body for emergency action. Our ancestors developed this response to help keep them alive. This precise and automatic protective reaction is still with us today.

Autonomic Nervous System Responses

Figure 3.2 shows some of the immediate effects of stress on the human body. The physiological changes that result from activating the sympathetic nervous system include:

- Increased central nervous system (CNS) activity
- Increased secretion of epinephrine (adrenaline), norepinephrine (noradrenaline), and cortisol into the bloodstream and to every cell in the body
- Increased heart rate
- Increased cardiac output
- Increased blood pressure
- Increased breathing rate
- Dilation of breathing airways
- Increased metabolism
- Increased oxygen consumption
- Elevated oxygen to the brain
- Shunting blood away from the digestive tract and directing it into the muscles and limbs
- Increased muscle contraction, which leads to increased strength
- Enhanced blood coagulation (blood-clotting ability)

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.



Brain becomes more alert.
- Stress hormones can affect memory and cause neurons to atrophy and die.
- Headaches, anxiety, and depression
- Disrupted sleep

Digestive system slows down.
- Mouth ulcers or cold sores

Heart rate increases and blood pressure rises.
- Persistently elevated blood pressure and heart rate can increase potential for blood clotting and risk of stroke or heart attack.
- Weakening of the heart muscle and symptoms that mimic a heart attack

Adrenal glands produce stress hormones.
- Cortisol and other stress hormones can increase central or abdominal fat.
- Cortisol increases glucose production in the liver, causing renal hypertension.

Skin problems such as eczema and psoriasis

🟥 = Immediate response to stress
🟦 = Effects of chronic or prolonged stress
⬛ = Other possible effects of chronic stress

Breathing quickens.
- Increased susceptibility to colds and respiratory infections

Immune system is depressed.
- Increased susceptibility to infection
- Slower healing

Digestive system slows down.
- Upset stomach

Reproductive system.
Menstrual disorders in women
- Impotence and premature ejaculation in men

Muscles tense.
- Muscular twitches or nervous tics

FIGURE 3.2
Effects of Stress on the Body

Source: *"The Effects of Stress on Body," Figure 4.2 in* An Invitation to Health, *16th Edition, by D. Hales (Stamford, CT: Cengage Learning, 2015) p. 87.*

- Increased circulation of free fatty acids
- Increased output of blood cholesterol
- Elevated blood sugar released by the liver to nourish the muscles
- The release of endorphins from the pituitary gland
- Dilation of the pupils of the eyes
- Hair standing on end
- Blood thinning
- Increased brainwave activity
- Increased secretion from sweat glands
- Increased flow from apocrine glands, resulting in foul body odor
- Constriction of capillaries under the surface of the skin, which increases blood pressure

When the fight-or-flight response is activated, the sympathetic nervous system decreases functions throughout the body in the following ways:

- The immune system is suppressed
- Blood vessels are constricted, except those that go to the muscles used for running and fighting
- The reproductive and sexual systems stop working normally
- The digestive system stops metabolizing food normally
- The excretory system turns off

- Saliva dries up
- Pain perception decreases
- The vagus nerve withdraws its activity
- Kidney output decreases
- Bowel and bladder sphincters close

To empower us to escape from threatening situations, we don't need this last set of functions and systems to run at high capacity. Their work, therefore, is suppressed to divert energy to the vital systems involved in increasing speed and power.

In contrast to the fight-or-flight response is a body state called the rest-and-digest response. In short, if you must run from a mugger, both nap time and digesting lunch—the rest-and-digest response—can wait.

The SNS and PNS work simultaneously. For example, in the presence of danger, the heart rate increases (SNS) while the digestive system shuts down (PNS); blood pressure increases (SNS) while the immune system shuts down (PNS). Understanding the nervous system's response to stress is essential in explaining the stress-related diseases and conditions covered in the next chapter.

3.5 The Stress Response in Today's World

You now understand that when faced with threats, our bodies respond with a series of physical reactions that mobilize internal forces that help us stay alive in dangerous situations. Researchers caution us, however, about the consequences of this response. Dr. Robert Eliot, former director of prevention and rehabilitative cardiology at St. Luke's Medical Center in Phoenix, explains: "When stress was primarily physical, people really did have to fight or flee. For the most part, modern stress is of a different nature, and we end up pumping high-energy chemicals for low-energy needs. The price is high: over the long haul, you turn the energy inward and burn out."[3] Many situations other than imminent physical danger can trigger the stress response.[4] This is because *our bodies are unable to distinguish between life-threatening dangers and more mundane problems, such as a disagreement with a friend, credit card debt, or a major exam.*

Today we face traffic jams and deadlines, loneliness and lack of money, arguments and exams—different types of challenges, none of which need us to run or fight. Most situations today are handled best with a calm, rational, controlled, socially sensitive approach. Our fight-or-flight response is an outdated mechanism to which our primitive systems have not yet adapted. We are 21st-century minds living in our ancient ancestors' bodies.

> The irony is this: our bodies react to stress in exactly the same way whether or not we have a good reason for being stressed. The body doesn't care if we're right or wrong. Even in those times when we feel perfectly justified in getting angry—when we tell ourselves it's the healthy response—we pay for it just the same.
>
> —*Doc Childre*

STRESS STORIES

Fight-or-Flight Kicked In—Just in Time

On one of my favorite mountain bike trails, I had been riding for about an hour and a half. It had been a terrific ride, but I was pretty exhausted (this trail has lots of hills to climb).

I was coming to the end of the ride, but I had one final hill to climb before I coasted home. Ascending the mountain, I rounded a corner. Next to the trail was a large bush. As I rode near the bush I suddenly heard, somewhere near the ground, a loud rattling and hissing sound.

I immediately knew what it was. There are plenty of rattlesnakes in the mountains of northern Utah where I live, and one had found a quiet place to spend the day underneath this bush.

I clearly recognized this sound and instantly bolted up the hill about 75 yards in nothing flat. It was the fastest I had gone all day, including the downhill parts of the ride. By the time I arrived at a really safe distance (10 yards would have been plenty), I turned back to see if the snake was following me. It wasn't. I realized I was safe again.

I immediately noticed how exhausted I was—breathing heavily, muscles in pain, even feeling a bit shaky—for the amount of energy I had just spent getting away from that snake as quickly as possible.

Even though I had seemingly no energy left after my long ride, the fight-or-flight response probably saved me from some very unwanted pain.

—MO

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

In the short term, we need to control our stress response to be effective in our daily life. In the long run, we need to keep it under control to avoid the consequences of burnout and poor health. Understanding the way our bodies work in response to our thoughts confirms the importance of being proactive, rather than just reactive, in coping with the effects of stress.

Acute Stress

The way the stress response works in the short run helps us generate great strength, focus more clearly, increase our speed, and perform at a higher level when a threat is present. Acute stress creates maximum power or speed, but for a brief time—little more than 30 to 60 seconds. Our bodies simply don't have the energy reserves to support maximal energy output for much longer than that. Occasionally we can use this source of immediate energy to help us when we do find ourselves, or others, in actual danger, facing potential pain or even death. Sarah showed this acute stress response in the Real People story at the beginning of the chapter. You probably can think of times when your body has responded to danger like Sarah's did.

The following situations are a sampling of circumstances of acute stress in which the demand, danger, or threat is immediate and very real:

- Being chased by an angry dog
- A blown tire on the highway
- A trip and fall down a steep hiking trail
- An earthquake
- A lightning strike

You get the point. Occasionally, you experience acute stress. Activation of the stress response at these times is beneficial and may even save your life. However, these types of experiences are rare in everyday life. Unless you work in a high-risk occupation such as being a police officer, a soldier in combat, a firefighter, or a white water rafting guide, your days rarely involve threats to your life.

Contrary to how our world may appear from watching the evening news, our society today is not one in which *real* acute threats or dangers are a daily occurrence. An upcoming exam or being late to work may make us feel like we are in danger, but in reality we don't need our primitive fight-or-flight survival response to manage these situations. What we will recognize, in upcoming chapters, is that the way we perceive the events of our lives is the primary factor that activates the stress response.

Chronic Stress

If the stress response stays in the "on" position longer than necessary to escape danger, the result can damage our health. If stressful situations pile up one after another, the body has no chance to rest and recover. *Chronic stress* is the term we use to describe this state of continued sympathetic nervous system activation. Instead of returning to homeostasis, the fight-or-flight response is activated for an extended time. This long-term activation of the stress-response system can disrupt nearly all body processes because of the chronic imbalances throughout the body. Figure 3.3 illustrates chronic stress.

STRESS STUDIES

Surprise Attack

Britt Erlanson/Stone/Getty Images

Surprise! You might think twice about surprising Grandpa Joe. Sudden emotional stress can damage the heart.

Myocardial stunning refers to a unique medical condition in which severe emotional stress causes heart abnormalities, including heart failure. A small, descriptive study was conducted to find possible causes for myocardial stunning. The subjects were previously healthy patients presenting to a medical center with chest pain or heart failure following an episode of acute emotional stress. The most common psychological stressor that started cardiac stunning was the news of an unexpected death, although some subjects had experienced the condition following an event such as a surprise party or a surprise reunion.

Authors of the study propose the following as possible causes for myocardial stunning: (1) coronary artery spasm from increased sympathetic tone due to mental stress and (2) microvascular spasm within the heart in response to a sudden release of stress hormones.

This study provides objective measures showing that emotional stress can injure the heart. Studies such as these can help us understand the powerful effect of stress on the body. You might want to think twice before you plan the surprise 90th birthday party for Grandpa Joe!

Source: *"Emotional Stress May Precipitate Severe, Reversible Left Ventricular Dysfunction," by L. Barclay & C. Vega,* Medscape Medical News, *February 9, 2005. Retrieved November 10, 2009, from http://www.medscape.com.*

FYI

Women's Stress

In similar circumstances and at similar stages of life, women consistently report feeling more stress than men do. Some researchers attribute women's higher stress to the many roles they play—spouse, mother, homemaker, employee, supervisor, and caregiver. We do know that women's stress hormones and blood pressure, unlike those of men, tend to remain elevated at the end of the workday.

Source: *"Three for 2003: Reducing the Burden of Stress,"* Harvard Women's Health Watch, *10*(5) *(2003).*

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

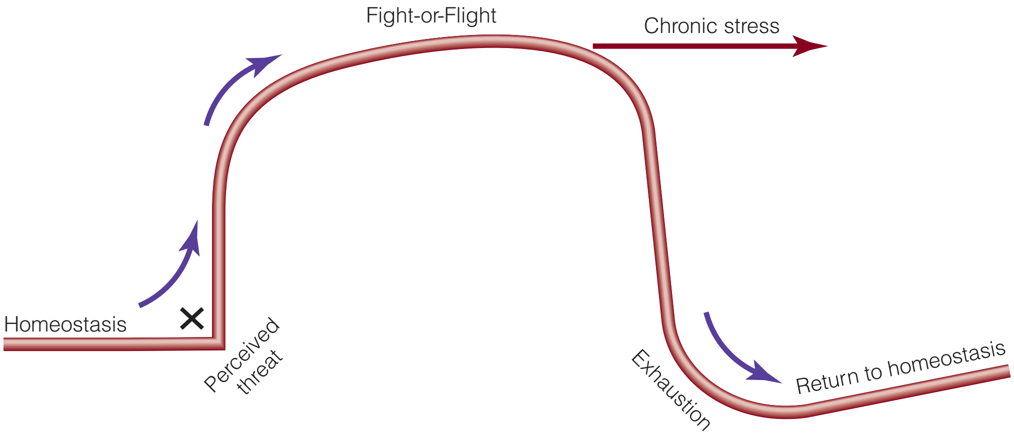


FIGURE 3.3
Chronic Stress

Your body is a wise instrument. It is designed to give feedback about the choices you make. Consider the person who deliberately gets drunk during an evening of partying. When he wakes up in the morning, hungover from excessive alcohol, his body sends messages of discomfort, including headache, nausea, unclear thinking, and muscle pain. This feedback provides a clue that drinking was not a healthy decision. Or when someone eats too much sugar at one time, she may experience feelings of nausea, tiredness, and irritability. By contrast, a jog or walk can result in feeling balanced, alert, refreshed, and energized. The body sends messages that running was a healthy decision. Our body lets us know what is beneficial and what is harmful to us—what is healthy and what isn't.

Our bodies give us feedback about unhealthy chronic stress with a host of signals or symptoms, indicating there is an imbalance. These symptoms of stress provide warning signs for more serious health problems. Listen to the messages your body sends. Although stress is not listed among the top 10 causes of death in the United States, it is linked to many illnesses. This does not necessarily mean that stress *causes* problems, but it does mean that it *contributes* to problems. We will explore these problems associated with chronic activation of the stress response more thoroughly in the next chapter.

> Pressure and stress is the common cold of the psyche.
>
> —*Andrew Denton*

3.6 The General Adaptation Syndrome

One of the best-known biological theories of stress is the **general adaptation syndrome** (GAS), a process by which the body tries to adapt to stress. The general adaptation syndrome provides a summary of the physiological changes that follow stress as the body attempts to return to homeostasis.

Stress pioneer Dr. Hans Selye developed the GAS theory[5] because of his research on the physiological effects of chronic stress on rats. Whenever he injected an animal with a toxin, he noted the following specific responses:

- The animal's adrenal glands enlarged.
- The animal's lymph nodes shrank.
- Eosinophils (white blood cells) dropped significantly.
- Severe bleeding ulcers developed in the animal's stomach and intestine.

Ten years earlier, as a medical student, he had noticed similar responses in humans. Selye theorized that the same pattern of changes occurs in the body in reaction to any kind of stress, and that the pattern eventually leads to diseases such as ulcers, arthritis, hypertension, arteriosclerosis, or diabetes. Selye called the pattern the general adaptation syndrome. For decades, researchers have studied the syndrome, and Selye's theories have held up to scientific scrutiny.[5] Figure 3.4 depicts the stages of the GAS.

Stages of the General Adaptation Syndrome

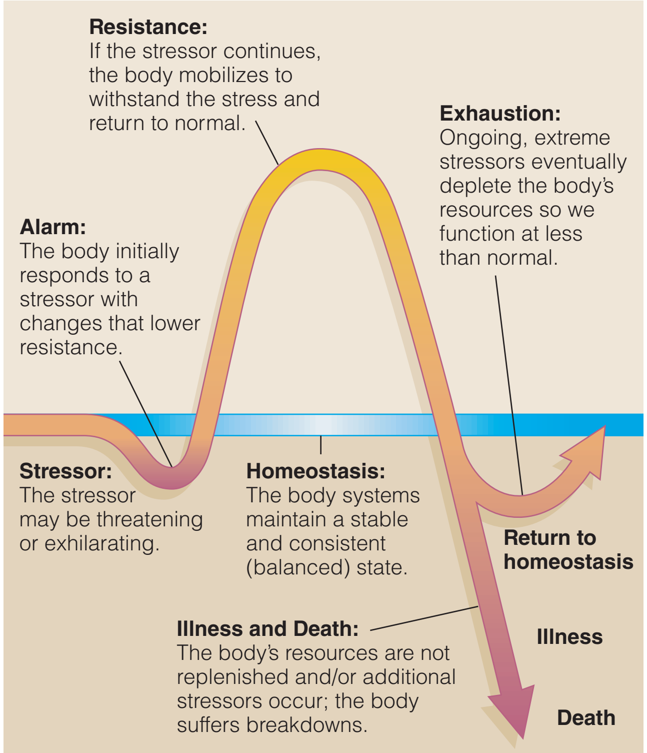
Dr. Selye identified three stages of the GAS:

1. *Alarm stage.* When a stressor occurs, the body responds in what has been described previously as the fight-or-flight response. Homeostasis has been disrupted. Several

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

body systems are activated, especially the nervous and endocrine systems, to prepare the body for action. If the stressor subsides, the body returns to homeostasis.

2. *Stage of resistance.* If the stressor continues, the body mobilizes its internal resources to return to a state of homeostasis, but because the perception of a threat still exists, the body does not achieve homeostasis. The stress response stays activated, usually at less intensity than during the alarm stage, but still at a level to cause hyperarousal. For example, if you learn that your mother has been diagnosed with cancer, you may respond intensely and feel high stress at first. During the next weeks, you struggle to carry on, but this requires considerable effort.
3. *Stage of exhaustion.* If the stress continues long enough, the body can no longer function normally. When chronic stress persists, organ systems may fail, and the body breaks down in a variety of ways. Nonstop stress that causes the body to adapt continually can negatively affect your health. A state of wellness is difficult to maintain over time when your body energy is channeled into coping with stress.



Resistance: If the stressor continues, the body mobilizes to withstand the stress and return to normal.

Exhaustion: Ongoing, extreme stressors eventually deplete the body's resources so we function at less than normal.

Alarm: The body initially responds to a stressor with changes that lower resistance.

Stressor: The stressor may be threatening or exhilarating.

Homeostasis: The body systems maintain a stable and consistent (balanced) state.

Illness and Death: The body's resources are not replenished and/or additional stressors occur; the body suffers breakdowns.

FIGURE 3.4
The Three Stages of Selye's General Adaptation Syndrome

Source: *"General Adaptation Syndrome," Figure 4.1 in* An Invitation to Health, *16th Edition, by D. Hales (Stamford, CT: Cengage Learning, 2015) p. 85.*

Application of the General Adaptation Syndrome

In their book *Lifetime Physical Fitness and Wellness,* Werner and Sharon Hoeger provide this excellent application of the GAS to college test performance.

As you prepare to take an exam, you experience an initial alarm reaction. If you understand the material, study for the exam, and do well (eustress), the body recovers, and stress is dissipated. If, however, you are not prepared and fail the exam, you trigger the resistance stage. You are now concerned about your grade, and you stay in the resistance stage until the next exam. If you prepare and do well, the body recovers. But if you fail again and can no longer bring up the grade, exhaustion sets in and physical and emotional breakdowns may occur. Exhaustion may be further aggravated if you are struggling in other courses as well.[6] Stressors, whether they are threatening or exhilarating, require adaptation. If you watch for manifestations of the exhaustion stage, you can act to return to a state of homeostasis.

STRESS BUSTING BEHAVIOR

Fighting Stress Exhaustion

Consider those that apply to you.

○ You recognize the symptoms of the fight-or-flight response.

○ You are aware of how often this response is triggered in you.

○ You are aware that if the stress continues long enough, or the stress is chronic, you will reach the stage of exhaustion.

○ If you experience the stage of exhaustion, you act and reprioritize:

- Are you doing too much?

  Yes ☐ No ☐

- Are all the things you "need to do" necessary?

  Yes ☐ No ☐

- Can you cut back on your commitments?

  Yes ☐ No ☐

- Can you put your health first, and plan a schedule that is lower in stress?

  Yes ☐ No ☐

3.7 The Stress Response and You

So how does all this relate to you? You may have never been chased by a big bear, or any other wild animal for that matter. Still, tuning in to your body's fight-or-flight response, and to the three stages of the GAS, can help you understand how to prevent the ill effects of chronic stress.

Think about the impact of stress in your life in terms of the FIT formula. FIT stands for:

- Frequency—How often is your stress response triggered?
- Intensity—How severe is your stress response when it is triggered?
- Time or duration—How long is the stress response activated?

In terms of your health and well-being, the most important of these three is duration. Chronic activation of the stress response will result in decreased quality of life. Physician Dan Beskind wrote:

> There is no doubt that the human body is exquisitely adapted to deal with stress in brief doses. Our fight-or-flight response is one example of the way that short bursts of heightened energy and vigilance can actually save our lives. But we aren't well adapted to deal with surges of adrenaline and cortisol day after day. In evolutionary terms, traffic jams, two-career marriages, and kids involved in six after-school activities were not part of the plan.[7]

The bottom line is this: Don't underestimate the immediate consequences of stress to drain the joy from life, and the long-term effects of serious health problems. Take responsibility for your health. Begin to slow down and carefully assess your choices for living wisely. This book is filled with strategies to help you.

TIME TIP

"I practice the 10-minute rule. Some tasks and homework assignments I dread doing, so I start by doing 10 minutes. I can always psych myself up for just 10 minutes. Then, if I want to, I can come back later for another 10 minutes. Most of the time, I end up finishing the project after I start, and this stops some procrastination."

—Sandi J.

3.8 Five Myths About Stress

This is an excellent time to review some of what you have learned in the first three chapters by examining common myths about stress. See if you agree with these myths.

Myth 1: In an Ideal World, There Would Be No Stress

Stress is not always bad for us. Too little stress leads to boredom and can make us miserable. Stress can be the spice of life if we learn how to manage it. Managed stress makes us productive and happy.

Myth 2: What Is Stressful for Me Is Stressful for You

Absolutely not correct. Stress is different for each of us. Situations are rarely stressful in and of themselves. What causes one person to lose it might not even ruffle another. Stress is something we create, and it depends on how we interpret situations. The good news is that if our mind creates our stress, then our mind can remove our stress.

Myth 3: Only Unpleasant Situations Are Stressful

Falling in love can be as stressful as breaking up. Winning the lottery can be as stressful as losing your job. Whether they are viewed as challenges or opportunities, or viewed as threats, is the critical ingredient in causing stress.

Myth 4: No Symptoms, No Stress

Not so. An absence of symptoms does not mean an absence of stress. While symptoms are the warning signs that stress is at work in the body, stress can be taking its toll even before symptoms are apparent, especially if you are not tuned into the messages your body sends to you. Concealing symptoms with medications, other drugs, or alcohol may deprive you of the signals you need to begin reducing physiological and psychological stress.

Myth 5: Stress Is Inevitable, So You Can't do Anything About It

Not true. You can change the ways you approach your life so that stress does not overwhelm you. You can learn specific techniques that not only help you cope with stress but prevent some stress from ever happening in the first place.

3.9 Conclusion

Your body is wonderfully designed to respond to acute stress for one outcome—your survival. The fight-or-flight or stress response is critical to your ability to survive life-threatening situations throughout your life. Through the actions of the autonomic nervous system, your body is programmed for a response that will protect you from harm.

In today's world, many of our challenges are not acute, physical challenges. Our stressors now are primarily psychological and social, such as having too much to do, financial debt, concern for a loved one, loneliness, or unhealthy relationships. The stress response is not well suited to deal with these types of stressors. When our bodies stay in a state of physiological hyperarousal without release, adverse health consequences accumulate.

Take a few minutes to think about the connections between the concepts presented in this chapter. Consider the relationship between the fight-or-flight response, acute and chronic stress, and the general adaptation syndrome. Relating these concepts to events in your life will help you see the relevance of the science of stress to your understanding of how stress affects you. This knowledge will also give you a foundation for understanding how relaxation techniques have the potential to interrupt the stress response. In Chapter 4, you will learn more about the powerful mind/body connection and its impact on health and disease.

ACTIVITY

3.1 Fight-or-Flight

ACTIVITY

1. Review the immediate physiological effects of the fight-or-flight response. Think about how each response is designed to help a person survive physical danger. List one reason why each of the following immediate physiological responses would happen when we need to deal with a real threat:
   - Increase in heart rate
   - Increase in breathing rate
   - Large (fighting and running) muscles become tense
   - Increase in tolerance for pain
   - Increase in blood sugar levels
   - Suppressed immune system
   - The digestive system stops metabolizing food normally
2. Clearly, the stress response becomes your best friend when you find yourself in a dangerous situation. The instantaneous speed, power, and quickness that come from fight-or-flight activation can save your life. Write down a situation when your life, or the life of someone you know, was really in danger; where the only desire was to stay alive by escaping.
3. Describe how your body reacted in ways that are like those described in this chapter with immediate activation of the stress response.
4. Consider the following situations that people perceive to be stressful. Take a moment to evaluate whether the event is one that calls for activation of the stress response to escape from it to stay alive. First, list the situations in which there is no real physical threat involved. Next, list the potentially life-threatening situations.
   - Taking a test
   - Having an argument

- Escaping from a house fire
- Arriving late for a class
- Being chased by a mugger
- Giving a prepared speech to a crowded room of people
- Sliding down a steep mountainside while hiking
- Being rejected when asking someone out on a date
- Getting a bad score on a test
- Getting ready for a crucial ballgame

5. How do you explain the fact that you feel stressed in situations where there is no real danger involved? What can you tell yourself in these situations to put the stressful event in perspective and keep your stress response in proportion to the actual risk?

Key Points

- The fight-or-flight response is the body's way of helping us survive physical danger.
- The fight-or-flight response involves a complex interaction of many body systems and organs. This response activates needed functions and minimizes unnecessary functions during times of danger.
- The autonomic nervous system (ANS) oversees many common functions in the body that occur involuntarily, such as digestion, heart rate, blood pressure, and body temperature.
- The two branches of the ANS are the sympathetic nervous system and the parasympathetic nervous system. The sympathetic branch handles expending energy. The parasympathetic branch handles conserving energy.
- The autonomic nervous system is controlled by the hypothalamus.
- Although the fight-or-flight response is essential to our survival during times of acute physical danger, this response can have unhealthy consequences during times of ongoing social or psychological concerns.
- The general adaptation syndrome describes a process in which the body tries to accommodate stress by adapting. This process consists of three stages: alarm, resistance, and exhaustion.

Key Terms

fight-or-flight response
homeostasis
tend-and-befriend response
autonomic nervous system
sympathetic nervous system
parasympathetic nervous system
hypothalamus
diencephalon
adrenal glands
epinephrine
norepinephrine
adrenal medulla
cortisol
adrenal cortex
myocardial stunning
general adaptation syndrome

References

1. *The Stress Effect*, by R. Weinstein (New York: Avery, 2004).
2. “What Doesn't Make Us Stronger Kills Us,” by S. Perrine, *Men's Health* (July/August 2004).
3. “Clinical Perspective on Stress, Cortisol and Adrenal Fatigue,” by J. L Wilson, *Advances in Integrative Medicine, 1*(2) (2014): 93–96.
4. “Fight or Flight Theory of Panic Disorder,” by S. Ankrom, retrieved November 22, 2019, from https://www.verywellmind.com/the-fight-or-flight-theory-of-panic-disorder-2583916.
5. “Relationship Between Personality and Biological Reactivity to Stress: A Review,” by O. Soliemanifar, A. Soleymanifar, & R. Afrisham, *Psychiatry Investigation, 15*(12) (2018): 1100–1114.
6. *Lifetime Physical Fitness and Wellness* (13th ed.), by W. Hoeger & S. Hoeger (Stamford, CT: Cengage Learning, 2015).
7. “Juggler's Syndrome,” by D. Beskind, *Utne Reader*, *122* (2004): 16.

chapter

4

The Mind/Body Connection

© senai aksoy/Shutterstock.com

> It is more important to know what sort of a person has a disease than to know what sort of disease a person has.
>
> —*Hippocrates*

How do my thoughts and feelings change my physical condition? For instance, can stress really change my cells?

Why do I get sick after I go through a stressful time?

What is the placebo effect, and does it really work?

Learning Objectives

Study of this chapter will enable you to do the following:

4.1 Describe the role of stress in disease.

4.2 Discuss how stress can affect body systems, including the cardiovascular, nervous, digestive, and immune systems.

4.3 Explain the concept of psychoneuroimmunology.

4.4 Explain the placebo effect as an example of the power of the mind over the body.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

Real People, Real Stories

Physician and scientist Dr. Esther Sternberg claims that, for many thousands of years, popular culture believed that stress could make you sick, and that believing could make you well. People believe what they feel, but scientists need evidence. Until recently, however, there really wasn't any good, reliable scientific evidence to prove these connections, nor was there a good way to measure them. Once scientists and physicians believed that there was a connection between the brain and the immune system, they could then take it to the next step: Maybe there is a connection between emotions and disease—between negative emotions and disease, and between positive emotions and health.[1]

We can then say, okay, these alternative approaches that have been used for thousands of years—approaches like meditation, prayer, music, sleep, and yoga—all of these approaches that we know in our heart of hearts really work to maintain health. Maybe there is a scientific basis for them.

Source: Excerpted from the website http://www.nlm.nih.gov/changingthefaceofmedicine/physicians/biography_309.html, Retrieved February 7, 2014.

A sound mind in a sound body is a short but full description of a happy state in this world.

—John Locke, philosopher, 1693

4.1 The Mind/Body Connection

More than 300 years after he made his observation about happiness, John Locke's insight into health and happiness still has relevance. Even though we may have widely differing experiences with stress, one thing is sure: What is going on with your mind and emotions is at least as important, if not more so, than what is happening in your body. Actually, what is going on in your mind *determines* what happens in your body.

When you look in the mirror, what do you see? You see your body, your hair, your skin, your muscles, and your face. We can see and understand how the body works. We can measure blood pressure, hormones, heart rate, and body fat, but what about your mind? Can we measure an emotion? Can we see a thought? Can we prove that our perceptions change our levels of stress? For decades, scientists have studied how stress affects the body. As you learned in earlier chapters, the body of knowledge explaining the physiology of stress is large. More recently, researchers have been studying the mind/body connection to understand how thoughts and emotions relate to our experience with stress.

4.2 Psychological Health

Psychological health, which encompasses both our emotional and our mental health, is instrumental in determining physical health. In Chapter 1, you learned from the definitions of the dimensions of health that emotional health relates to feelings and the ability to achieve emotional balance, while mental health refers to a state in which the mind is engaged in lively, healthy interactions both internally and with the world around you. Psychologically healthy people develop awareness and control of their thoughts and feelings. The outcome is a sound, satisfying quality of life.

Today, we know beyond question that the mind and emotions have a powerful and very real impact on the body. James Gordon, M.D., director of the Center for Mind-Body Studies in Washington, DC, says:

> The mind clearly can have a profound effect on every aspect of physiologic functioning. Individuals who are chronically pessimistic, angry, anxious, or depressed are clearly more susceptible to stress and illness, including heart disease and cancer.[2]

Similarly, almost every medical illness affects people psychologically as well as physically.

There is nothing either good or bad but thinking makes it so.

—Shakespeare

Clearly, stress affects your body and physiology. In Chapter 3, you learned about how the stress response activates a specific physiological process in your body. But what part does your mind play in your experience with stress? *A complex physiological process, the stress response, always starts with a single thought.* Your thoughts are responsible for the stress you experience.

In this chapter, we will explore the interesting relationship between the mind and the body to better understand the role of stress in both disease and health. You will read about scientific studies that supply a solid foundation of scientific evidence explaining the

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

connection between the body and the mind. You will see how you can use this information to go beyond preventing disease to promoting optimal health.

4.3 The Role of Chronic Stress in Disease

Stress is an everyday fact for most people. Hundreds of studies over the last 30 years have shown that stress contributes to a significant percentage of all major illnesses, including the number-one cause of death in America, cardiovascular disease. Cancer, endocrine diseases, emotional disorders, and a vast array of other stress-related disorders account for many visits each year to healthcare providers. *Healthy People 2020*, the document containing the health promotion goals for our nation, reports the continuing trend that mental health problems are among the most pressing concerns in public health. Five of the ten Leading Health Indicators (high-priority public health issues) identified by the Office of Disease Prevention and Health Promotion are significantly interrelated with stress. These include mental health, obesity, smoking, physical activity, and substance abuse.

FYI

The Impact of Stress

Did you know that:

- Many Americans (22%) report experiencing extreme stress—an 8, 9, or 10 on a 10-point scale, where 1 is little or no stress and 10 is a great deal of stress.
- More adults report that their stress is increasing than decreasing.
- More than 9 in 10 (94%) adults believe that stress can contribute to the development of major illnesses such as heart disease, depression, and obesity; and that some types of stress can trigger heart attacks, arrhythmias, and even sudden death, particularly in people who already have cardiovascular disease (92%).

Source: *http://www.apa.org/news/press/releases/stress/2011/final-2011.pdf, retrieved January 19, 2014.*

Direct and Indirect Effects of Chronic Stress

Evidence supports the premise that stress can affect health either directly by way of physiological changes in the body, or indirectly through a change in a person's behavior. The clearest connection between stress and disease is demonstrated by the release of hormones by the endocrine system during the alarm reaction stage of the general adaptation syndrome (GAS). The cardiovascular, immune, and other systems of the body are affected.[3] In Chapter 3, you learned that chronic stress can result in exhaustion, the final stage of the GAS. If the fight-or-flight response stays activated for an extended period, we start to experience physical and emotional effects.

The indirect effects of stress on health occur when those who experience high levels of stress engage in unhealthy behaviors. For example, it has been shown that individuals with high stress consume more alcohol, smoke more cigarettes, and drink more coffee than people with less stress. The use of these substances has been associated with higher risks for heart disease and cancer, as well as trauma and death from unintentional injuries.[3] In Chapter 15, you will learn more about how lifestyle habits and daily choices affect stress.

Prolonged stress can be the result of many repeated rounds of acute stress, such as several semesters with an unusually heavy load (episodic acute stress), or a life condition such as a difficult job situation or chronic disease. In either case, the stress response is activated as if we are responding to physical danger. The constant perception of threat sends messages to the body systems that the survival mechanisms of the fight-or-flight response must be continually activated. As a result, the healthy functioning systems of the body cease to work well.

What feedback might your mind and body give you that show continued activation of the stress response?

> We are what we think. All that we are arises with our thoughts. With our thoughts we make the world.
>
> —*Buddha*

Allostatic Load

Our body strives for a balanced state. Like a thermostat, every system in the body is continuously adjusting to environmental conditions, continually adapting to promote survival and reproduction. Unlike a thermostat, however, the body learns to anticipate needs and prepares to satisfy them even before they arise. Yet the way our body works presents us with a paradox: what can protect us can also damage us. The body pays the price for the ongoing effort to repeatedly establish stability. The cumulative physiological wear and tear on the body that results from ongoing adaptive efforts to support homeostasis in response to stressors is termed an **allostatic load**. The body's response to repeated or chronic stress is a cascade of cause and effect, with the possible result of deteriorating health from a variety of conditions.

Allostatic load explains how frequent activation of the stress response, essential for managing acute threats, can, in fact, damage the body over time. Cortisol and adrenaline (along with other physiological factors that lessen the effects of stress on the body) have protective and adaptive outcomes in the short term, yet over longer time intervals, when called on frequently, they can accelerate disease processes.

The concept of an allostatic load as an indication of cumulative lifetime effects of all types of stress on the body is based on the hypothesis that there is an increased physiological risk associated with exposure to psychosocial stressors over the life-course; the continued physiological imbalance can contribute to poor health outcomes. An understanding of allostatic load will help you explain the medium-term and long-term effects of chronic stress. Awareness of the impact of chronic stress can help you appreciate why preventing and managing stress is essential to good health.

4.4 Medium-Term Chronic Stress

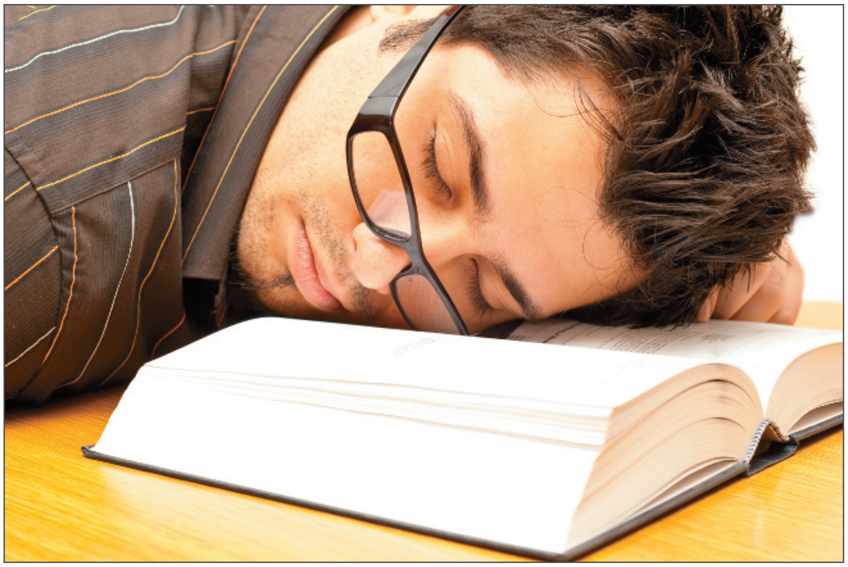
When we recognize what happens during the stress response, we can understand why medium-term health problems arise. Many body functions turn off because they are not needed when there is a danger. Other physiological functions in the body are activated to higher than normal levels. When we are not in danger, however, continued activation of the stress response is not necessary: You need only *think* you are under threat to activate the stress response.

Effects of Medium-Term Chronic Stress

Common effects of medium-term chronic stress include muscle tension and pain, headaches, fatigue, upset stomach, difficulty sleeping, bruxism, sore throat, and colds. Each of these conditions is briefly explained in relation to stress.

Muscle Tension and Pain Do you ever feel like your muscles are so tight that your shoulders are pulled up around your ears? Do tight neck muscles cause you stiffness and pain? Typically, a muscle is not in the contracted state for a prolonged amount of time. A muscle is supposed to contract only when it receives a message to contract. When a muscle is told to continue contracting for a prolonged time, two noticeable results are pain and fatigue. When a muscle stays contracted, it activates nervous system pain receptors that deliver the message of physical pain.

Headaches A headache may result from muscles that tighten longer than intended in response to a threat. If the contracting muscles are head muscles, or posterior neck muscles, the result is a headache. This explains why people take muscle relaxants to ease headache pain. A headache can provide feedback that our thoughts are causing tension.



© R.Ashrafov/Shutterstock.com

Fatigue is a common symptom of chronic stress.

Fatigue Another effect of continued muscle contraction is fatigue. Have you ever come home from a rough day at work or school totally exhausted, even though you have exerted little physical effort? When a muscle is continually receiving the message to be ready for action, fatigue results. Much energy is needed for muscles to remain contracted.

Upset Stomach In fight-or-flight situations, we do not need the digestive system, so it ceases to coordinate all the processes necessary to break down food efficiently. When the stress response is activated continually, the digestive system won't transport food from the digestive system to the bloodstream as effectively. An upset stomach is one of the results.

Difficulty Sleeping We should not require more than a few minutes to start sleep. We also should sleep comfortably through the entire night without waking up several times. Sleeping should happen naturally. If we struggle to fall asleep, it may be because our minds are overthinking about things not associated with sleeping. Upsetting thoughts of today's activities, or worrisome thoughts about tomorrow, send messages to the mind that resemble threats.

Consequently, the body stays aroused and alert. One physiological response of the fight-or-flight syndrome is altered brainwave activity. Sleep-inducing brainwave activity can happen only when we can turn off the stress response. Stress can hurt you even more because it affects the ability to sleep, which in turn affects the ability to cope with stress and anxiety.

Bruxism **Bruxism** is grinding, gnashing, or clenching the teeth during sleep or during situations that make a person feel anxious or tense. This condition is the third most common form of sleep disorder. Estimating how many people suffer from bruxism is difficult because it relies primarily on self-reporting. Most estimates show that bruxism affects about 10 to 20% of the population. Although physiological conditions can cause bruxism, more often the causes are psychological, including anxiety, stress or tension, suppressed anger or frustration, or aggressive, competitive, or hyperactive personality characteristics.[4]

If you grind your teeth because of stress, you may be able to prevent it through strategies that promote relaxation, such as exercise and meditation. Cutting down on consumption of alcohol, tobacco, and caffeine may also help, as the condition seems to worsen with the use of these substances.

Cold or Sore Throat We do not need the immune system for fight-or-flight situations, so it gears down its high-functioning protection. The immune system is the internal defense mechanism that keeps us from contracting a cold or the latest flu that is going around. Without a healthy immune system, the virus can get the upper hand.

Additional Symptoms Additional symptoms associated with medium-term effects of chronic stress include potentially preventable conditions such as the following:

Aching jaw, tight forehead
Anger
Anxiety
Change in appetite
Concentration problems
Constant low-grade fever
Depression
Diarrhea or constipation
Dysfunctional mitochondria
Excessive sweating
Heart palpitations
Increased blood pressure
Lack of interest in food
Menstrual problems, missed menstrual periods
Overall nervous tension
Rashes, hives, skin irritation
Shortness of breath, dizziness
Sweaty palms
Tightness in chest, back, shoulders
Tingling sensation in fingers or toes
Any number of other symptoms

WHAT ELSE CAN I DO?

Put the Glass Down

A professor is presenting a lecture on stress management. He raises a glass of water and asks the class, "How heavy do you think this glass of water is?" The students guess about 6 ounces.

"It doesn't matter what the absolute weight is," the professor replies. "It depends on how long you hold it. If I hold it for a minute, it is okay. If I hold it for an hour, my arm will start to ache. If I hold it for a day, you will have to call an ambulance. It is the exact same weight, but the longer I hold it, the heavier it becomes."

If you continue to carry your burdens all the time, eventually you will not be able to carry on. The weights will be too heavy. You will have to put the glass down and rest a while before you hold it up again. You will have to put your burdens down from time to time so you can be refreshed and able to carry on. Whatever difficulty you are carrying on your shoulders, let it down. Take a rest. If you must, you can pick it up again later when you have rested. Take time to rest and relax.

—Source unknown

TIME TIP

"To help manage my time better, before I go to bed, I lay out everything I need for the next day, so in the morning I'm not rushing around the apartment looking for books, shoes, and keys. I also make a list of what I need to do the next day. This few minutes of preparation really helps me get off to a good start to the day. An added benefit: When my head hits the pillow, I am ready to sleep, knowing I am prepared for the day to come."

—Matt S.

Medium-Term Stress and the Immune System

Have you ever noticed that you often get sick after you go through a stressful experience? Because the immune system is unable to work as effectively when you are stressed, you are more susceptible to the diseases and illnesses that cross your path.

STRESS STUDIES

The Cold, Hard Facts

The common cold is not an equal-opportunity attacker, according to research from psychologist Sheldon Cohen. Why do some people rarely catch a cold despite being exposed to hoards of sneezing, sniffling cold-sufferers, while others seem to find every bug that comes along? A growing body of evidence suggests that factors such as personality, stress, and social life can all affect our vulnerability to the common cold.

Cohen's research involved exposing volunteers to colds by dropping rhinoviruses into the nose. The subjects then were quarantined and watched for the development of infection and cold symptoms. After 5 days of quarantine, medical exams and questionnaires revealed the following:

- Happy, relaxed people are more resistant to illness than those who tend to be unhappy or tense. Adults with the worst scores for calmness and positive mood are about 3 times more likely to get colds than the more relaxed and contented adults. When happy people do get sick, their symptoms are milder.
- Work-related or personal stress that lasts at least a month increases the chances of catching a cold. In the lab, the longer that people experience stress, the more likely they were to catch a cold.
- The rates of respiratory infection and clinical colds increased in a dose-response manner (as stress levels increased, so did the number of colds) with the extent of psychological stress the person had experienced in the previous year.

From this research, we can add fewer colds to the list of the benefits of stress management.

Source: *"Psychological Stress and Susceptibility to the Common Cold," by S. Cohen, D. Tyrrell, & A. Smith,* New England Journal of Medicine, *325 (1991): 606–612.*

The culprit for a suppressed immune system in times of ongoing stress is the stress hormone cortisol. Typically, when the body encounters a virus or bacteria, the immune system goes to work, eliminating the foreign body. But stress causes the immune system to be less sensitive to cortisol. Instead of reducing the inflammation, cortisol causes an increase in inflammation, which leads to a higher likelihood of developing a cold.

Researchers demonstrated this with a study divided into two parts. In the first part, healthy volunteers were deliberately exposed to viruses that cause colds. They were then monitored for changes in inflammation—a natural response to help fight infection, but also produce cold symptoms. The participants were interviewed to find out if they had experienced prolonged chronic stress in the past year. Those who reported higher stress levels experienced cold symptoms more frequently. In the second part of the study, participants who were exposed to the virus were monitored for inflammation and cold symptoms. Those with higher stress levels ended up with more cold symptoms. This study[5] suggests that chronic stress dampens the immune system.

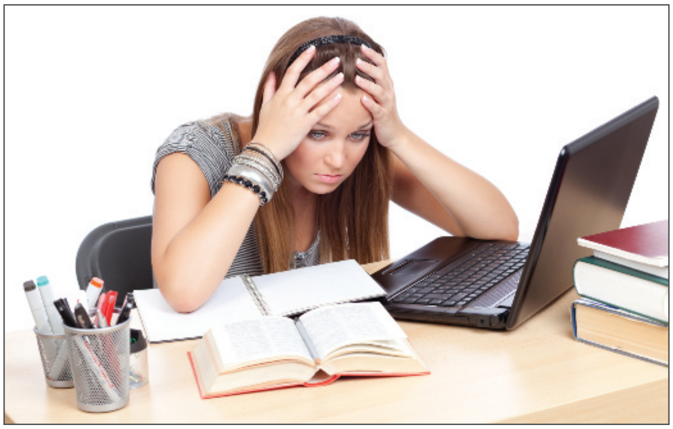
Other medium-term symptoms of chronic stress result when the stress response causes imbalances throughout normally functioning body systems. These symptoms signal to us that we need to make some changes. We should keep in mind that whatever system turns on or off is a direct response to what we would need if we were in actual danger. When this goes on for an extended period, our health suffers.

4.5 Long-Term Chronic Stress

While the medium-term effects of chronic stress are unpleasant and annoying, the long-term effects are dangerous and contribute to disease, suffering, and even death.

Stress and the Heart

Cardiovascular disease is the number-one cause of death in the United States. One of the most devastating results of long-term chronic stress may turn out to be its link to cardiovascular disease. What is the relationship between cardiovascular disease and stress?



© Ana Blazic Pavlovic/Shutterstock.com

High levels of stress hormones can interfere with memory.

FYI

Did you know that high levels of stress hormones can interfere with memory? Stressful events that cause the release of certain hormones can make you forget things you know you should know. This helps explain why your mind goes blank when you stand up to give a presentation, or why test anxiety causes you to forget the information you know as soon as you walk away from the test. Normal memory function returns when the levels of stress hormones return to normal. This is yet another good reason to practice pre-test deep breathing and relaxation.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

Increasingly, evidence suggests a relationship between the risk of cardiovascular disease and environmental and psychosocial factors. These factors include job strain, social isolation, and personality traits. More research is needed to fully understand how stress contributes to the risk of heart disease and whether stress acts as an independent risk factor for cardiovascular disease. Acute and chronic stress may affect other risk factors and behaviors, such as high blood pressure, cholesterol levels, smoking, physical inactivity, and overeating.[6]

While the research continues, researchers have made some significant advances in understanding the association between stress and cardiovascular disease. Some of the findings are as follows:

- Mental stress increases oxygen demand because blood pressure and heart rate are elevated.
- Vascular resistance and coronary artery constriction during mental stress decrease the blood supply, resulting in reduced blood flow to the heart muscle.
- As a result of stress, blood tends to clot more easily. Your body is designed so you won't bleed to death, but increased blood clotting in the blood vessels that surround the heart or blood vessels in the brain can increase the chances that one of those clots may lodge itself on the wall of a blood vessel. If a clot is too big and the diameter of the blood vessel is too small, and if we add to that an increase in blood pressure, which weakens the blood vessels, the result may be a heart attack or a stroke.
- Chronically high levels of cortisol may affect cardiac health by promoting inflammation that causes heart attacks.

Stress and Cellular Growth and Repair

When stress is chronic, less energy can go to the internal environment for cell growth and repair. Energy designed to help cells and tissues heal and grow is channeled elsewhere. Essentially, the healing cells shut down; they stop communicating with each other. Routine maintenance and growth at the cellular level give way to total defense to protect from perceived dangers.

> Joe Dispensa describes it this way: It's like living in a country where 98 percent of the resources go toward defense, and nothing is left for schools, libraries, road building and repair, communication systems, growing of food, and so on. Roads develop potholes that aren't fixed. Schools suffer budget cuts, so students wind up learning less. Social welfare programs that took care of the poor and the elderly have to close down. And there's not enough food to feed the masses.[7]

Many studies give strong evidence that healing shuts down during emergencies. Researchers at the Ohio State University Medical Center found that more than 170 genes were changed by stress, with 100 of them shutting off completely (including many that directly make proteins to promote the suitable type of wound healing). The researchers stated that wounds of stressed patients took 40% longer to heal, and that "stress tilted the genomic balance toward genes that were encoding proteins responsible for cell-cycle arrest, death, and inflammation."[8]

Stress and the Immune System

Stress has a profound impact on the immune system—the network of organs, tissues, and white blood cells responsible for defending the body against disease. The immune system includes lymphocytes, monocytes, and chemical messengers called **interleukins**, which allow the lymphocytes to communicate with each other. Stress causes cortisol to slow production of lymphocytes, as well as to suppress the release of interleukin. Stress hormones inhibit the immune system, making the body less capable of fighting disease and infection.

Simply stated, stress hinders the immune system's ability to produce and maintain **lymphocytes** (the white blood cells necessary for killing infection) and **natural killer cells**

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

STRESS BUSTING BEHAVIOR

Stress and Your Health

When you are stressed, your immune system is weaker than usual. Consider which of the following you do to avoid getting sick in times of stress. Then, decide which is your "weakest link" in times of stress.

○ Avoid increased use of alcohol or cigarettes
○ Avoid increased consumption of caffeine
○ Avoid increased consumption of sugar
○ Eat balanced meals
○ Get regular physical activity
○ Get a good night's sleep
○ Use meditation, prayer, and other stress-reducing activities
○ Try to keep a calm, positive attitude

(the specialized cells that seek out and destroy foreign invaders). Both are crucial in the fight against disease and infection.[9] Impaired immunity makes the body more susceptible to many diseases, including infections and disorders of the immune system such as the autoimmune disease rheumatoid arthritis.

Stress and Aging

If you have looked at "before" and "after" photos of U.S. presidents, you won't be surprised that research supports the premise that prolonged stress can age people prematurely. Emerging research suggests that over-the-top stress can injure cells of the body.

In a study published in the *Proceedings of the National Academy of Sciences*, the research team found that chronic stress accelerates the aging process by shortening the life span of cells and opening the door to disease. The cells of people under high stress aged the equivalent of 9 to 17 years more than the cells of people under little stress. The study involved mothers caring for chronically ill children and, as a control, mothers with healthy children. The longer a mother had been caring for a sick child, the higher her stress level, and the more severe her cellular degeneration.

Even in the control group, women who merely *thought* they were stressed also showed significant cellular deterioration. "It's not just that you're a caregiver," says Elissa Epel, one of the psychologists who co-authored the study. "It may be more or equally important how you view your life and cope with demands, and what kind of support you have."[10] Caregivers who viewed their situation positively didn't seem to suffer the ill effects of stress. Epel concluded that a positive outlook on life, and the support of friends, might help buffer a damaging stress response.

The link between stress and premature aging has significant implications for health. The specific

Souza, Pete, photographer/The Library of Congress
Whitehouse.gov

Stress contributes to premature aging. Look at the pictures of former President Obama at the beginning and the end of his presidency and see if you agree.

cellular changes studied in this research could become a warning sign to help doctors prescribe life-extending therapies. That means that people at risk for high stress could slow cell aging through exercise, meditation, prayer, or other forms of stress reduction.[10] We have long known that a common factor among people who live to be at least 100 years old is that they handle stress well.

Stress and Learning

Consider the mind as having two parts—an Einstein Mind and a Lizard Mind. The Einstein Mind is the part of our thinking that learns math and languages, remembers information for a test, solves problems, and makes plans for the future based on memories of the past. The Einstein Mind is the one we use during most activities of a typical day.

The Lizard Mind, on the other hand, is the part responsible for keeping us alive in the presence of danger. It knows how to coordinate all the body functions, so when danger is present, it will do everything possible to make us powerful and speedy. The Lizard Mind is not very interested in figuring out how to solve a math equation or the steps required to fix a flat tire.

When the stress response is activated, the Einstein Mind shuts down and the Lizard Mind works overtime. Have you ever gone into a testing center to take a really important test, one you are pretty nervous about? You open up the test, and you cannot remember a thing. Your mind is blank. You know the information is somewhere in your memory banks, but you cannot seem to access it. The harder you try, the worse it gets.

This is an example of how stress affects higher-order thinking. Our ability to reason, process thoughts, and recall essential information diminishes significantly when the stress response is active.

STRESS STUDIES

Stress and Diabetes

Men who reported permanent stress have a significantly higher risk of developing Type 2 diabetes than men who reported no stress. This is the finding of a 35-year prospective follow-up study of 7,500 men in Gothenburg by the University of Gothenburg, Sweden. Stress at baseline in this study was measured using a single-item question which asked participants to grade their stress level on a six-point scale, based on factors such as irritation, anxiety, and difficulties in sleeping related to conditions at work or at home. At baseline, 15.5% of the men reported permanent stress related to conditions at work or home, either during the past year or the past 5 years.

The study results show that men who reported permanent stress had a 45% higher risk of developing Type 2 diabetes, compared with men who reported no or periodic stress. Self-perceived constant stress is a long-term predictor of diagnosed diabetes, independent of socioeconomic status, BMI, and other conventional Type 2 diabetes risk factors.

"Today, stress is not recognized as a preventable cause of diabetes," says researcher Masuma Novak, who led the study. "Our study shows that there is an independent link between permanent stress and the risk of developing diabetes, which underlines the importance of preventive measures."

Source: *"Perceived Stress and Incidence of Type 2 Diabetes: A 35-year Follow-up Study of Middle-aged Swedish Men," by M. Novak, L. Björck, K.W. Giang, C. Heden-Ståhl, L. Wilhelmsen, & A. Rosengren, retrieved February 8, 2014, from http://www.ncbi.nlm.nih.gov/pubmed/23075206 and http://www.eurekalert.org/pub_releases/2013-02/uog-psc020713.php.*

Stress and Inflammation

The evidence is increasing that chronic inflammation plays a role in diseases from cancer to depression to Alzheimer's, and stress is a key player in chronic inflammation. Research by Carol Shively, a professor of pathology at Wake Forest School of Medicine, shows that fat cells that accumulate near organs in your abdominal cavity tend to behave like little factories, responding to stress hormones that you produce when you're frazzled or overtired by pumping out chemicals of their own. The stress hormone cortisol appears to bind to receptors on these fat cells, setting off a process that promotes the storage of fat and increases the number of fat cells. These new cells then produce more chemicals that increase inflammation. Anything that stresses the body, from too little sleep to too much tension, can cause belly fat to accumulate.[11,12]

Other Disease Conditions of Stress

Long-term chronic stress adversely affects health beyond increasing the risk for cardiovascular disease and compromising the immune system. Studies suggest that high levels of stress can trigger many diseases and conditions—from obesity to ulcers. These and other stress-related disorders sicken millions of people each year, says brain researcher Bruce McEwen at Rockefeller University in New York.[13] Chronically high cortisol levels lead to several health effects, including insulin resistance and poor sleep patterns. This can reinforce bad eating habits that can then trigger fatigue, which saps our desire to exercise. It is a vicious cycle. The following list of stress-related conditions is long, as you can see.

© Zurijeta/Shutterstock.com

A common factor among people who live to be at least 100 years old is that they handle stress well.

Abnormal heartbeat (arrhythmia)
Alcoholism
Allergies
Angina pectoris
Arteriosclerosis
Asthma
Atherosclerosis
Autoimmune problems
Birth defects
Breast cancer
Bruxism
Burnout
Cancer
Carpal tunnel syndrome
Cholesterol levels elevated
Chronic backache
Chronic fatigue syndrome
Chronic obstructive pulmonary disease (COPD)
Chronic tension headaches
Chronic tuberculosis
Cold sores
Common cold
Coronary heart disease
Coronary thrombosis
Depression
Diabetes
Eczema
Endocrine problems
Epileptic attacks
Erectile dysfunction
Fertility problems
Fibromyalgia
Gastritis
Gastroesophageal reflux (GERD)
Headaches
Heart disease
High blood pressure
Human immunodeficiency virus (HIV)
Hives
Hypertension
Hyperthyroidism
Immune system disturbances
Impotence
Infertility
Insomnia
Irritable bowel syndrome
Kidney disease
Loss of interest in activities
Memory loss
Menstrual problems
Migraine headache
Multiple sclerosis
Myasthenia gravis
Night eating syndrome
Obsessive-compulsive disorder (OCD)
Premenstrual dysphoric disorder (PMDD)
Pancreatitis
Premature aging
Psoriasis
Raynaud disease
Respiratory ailments
Rheumatoid arthritis
Shingles
Social anxiety disorder
Stroke
Systemic lupus erythematosus
Telomere shortening
Temporomandibular joint (TMJ) syndrome
Ulcerative colitis
Ulcers

The Centers for Disease Control and Prevention estimates that stress accounts for about 75% of all doctor visits. According to Occupational Health and Safety news and the National Council on Compensation of Insurance, up to 90% of all visits to primary care physicians are for stress-related complaints.[3]

You can clearly see that the disrupting effects of stress have a profound impact on body physiology. Understanding how stress contributes to disease is helped by exploring how the mind and body communicate.

4.6 How the Mind and Body Communicate

An ever-increasing body of research shows that attitudes, thoughts, and emotions impact health. Growing awareness of the role that thoughts and feelings play in health opens some exciting possibilities into our ability to prevent disease and heal ourselves. Knowledge of

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

the thoughts and emotions that contribute to stress and the conscious effort to control and change those factors can clearly result in improved health.[12]

To help you understand how the mind and body communicate, we will explore three areas of study: psychosomatic illness, the placebo and nocebo effect, and psychoneuroimmunology. This knowledge will help you discover the power of the mind techniques for relaxation, which we will explore in later chapters.

Psychosomatic Illness

You might have heard someone say, "She's not really sick. It's all in her head." For years, the common belief of psychosomatic illness was that it was not real, that somehow the person imagined that he or she was sick or didn't feel well. The idea was that all illness was caused by such things as germs, radiation, tobacco, or diet. How could diseases such as cancer and heart disease, or even a stomachache or the flu, be the result of how our mind interprets events in life? The mind could not actually be the cause of ill health, could it?

Experience tells us otherwise. Have you ever wanted to avoid taking part in some activity, and as a result, uncovered the incredible power of creating a short-lived sickness that got you out of the event? We do have the ability to make ourselves sick.

For as a man thinketh in his heart, so is he.

—Proverbs 23:7

Fortunately, we have come a long way in our understanding of psychosomatic conditions. The term ***psychosomatic*** originates from the core words *psyche*, meaning mind, and *soma*, meaning body. Conditions that have a mind and body connection are often called psychosomatic. Today, psychosomatic conditions also are called **psychophysiological** to avoid the negative connotation that the condition is somehow imagined.

It has become clear that our bodies are thinking and feeling entities. Research by Dr. Candace Pert, internationally recognized pharmacologist and author, has proven that our thoughts and feelings affect our health. She wrote:

> As I've watched as well as participated in this process, I've come to believe that virtually all illness, if not psychosomatic in foundation, has a definite psychosomatic component. Recent technological innovations have allowed us to examine the molecular basis of the emotions, and to begin to understand how the molecules of our emotions share intimate connections with, and are indeed inseparable from, our physiology. It is the emotions, I have come to see, that link mind and body.[15]

CULTURE CONNECTION

"In a Climate of Overwork, Japan Tries to Chill Out"

Stress in Japan claims the lives of 10,000 Japanese men a year.* ***Karoshi*** in Japanese means "death by overwork." *Karoshi* is a rising social concern that has resulted directly from the well-known, hardworking Japanese society that produced the highest productivity for its economy in the late 20th century. The Japanese government reported a significant increase in fatal heart attacks and strokes attributable to overwork, with the hardest-hit groups being information technology experts, doctors, teachers, and taxi drivers. A record number of suicides also were reported during that same time. In its evaluation of working practices in the six months before death, the Japanese Health, Welfare and Labor Ministry found that the *karoshi* victims were working an average of more than 80 hours each week.

The good news is that many Japanese workers and businesses are finding options to help relieve ***sutoresu,*** the Japanese word for stress. English gardening, aromatherapy, reflexology, pets, and herbs have joined the traditional leisure pursuit of hot-spring bathing in a boom in ***iyashi***—a word that conveys a mixture of healing, calming, and getting close to nature.

The bad news is that the ingrained belief that a worker should sacrifice personal well-being for the company means that even the most *iyashi*-conscious must compromise. Compounding the situation is that an obsession with work is often seen as a virtue in Japanese culture, and weariness a sign of weakness. "Americans and Japanese work the most in the world, but the work ethic is much more extreme in Japan because of the patriarchal legacy of loyalty between the samurai and feudal lord," says Dr. Relko Homma True, a psychologist and consultant to many Japanese mental health organizations.*

Despite the *iyashi* boom, the Japanese seem to be working harder than ever. Labor statistics show that the average worker takes only 49.5% of his or her vacation allowance. Ironically, this demanding work is creating economic as well as psychological problems, because many in the workforce do not have enough free time to spend their money, which slows economic activity.**

Source: *"Health and Productivity Management on the March in Europe," by W. Kirsten, *Health and Productivity Management, 4*(1) (2005): 31.
**"In a Climate of Overwork, Japan Tries to Chill Out," by J. Watts, *Lancet*, *360* (9337) (2003): 932.

In a recent study, researchers concluded that "loneliness is associated with an increased risk of developing coronary heart disease and stroke, independently of traditional cardiovascular disease risk factors."[16]

The Placebo and Nocebo Effects

One of the best-researched examples of the power of the mind to create physical changes in the body is the **placebo effect,** a phenomenon whereby an inactive substance or treatment is used to determine how the power of suggestion affects the psychology, physiology, or biochemistry of experimental participants.[17] The placebo effect happens when a person expects that he or she will benefit from an intervention.

Placebos are often used in studies to test new medications. Some subjects are given the drug, and, as a control, some are given a placebo—an inert substance. The results then are compared. In study after study, across a broad range of medical conditions, 25 to 35% of patients consistently experience adequate relief when they receive placebos instead of conventional medicines or procedures. The research on placebos supports the premise that belief that a treatment works does result in increased effectiveness.

A study examined how people reacted to migraine pain medication compared with a placebo. One group took a migraine drug labeled with the drug's name; another took a placebo labeled "placebo." And a third group took nothing. The researchers observed that the placebo was 50% as effective as the real drug to reduce pain after a migraine attack.

FYI

What Is Lipragus?

Healthcare providers have long understood the impact of the placebo effect. Larry Dossey, M.D., writes about an early experience with the placebo effect while he was working in a hospital pharmacy during his college days. Curious to learn about the most popular medications prescribed in the hospital, he encountered the medicine Lipragus. He learned that Lipragus was basically "*sugar pill*" spelled backward.

Source: Meaning and Medicine, *by L. Dossey (New York: Bantam, 1991).*

The researchers speculated that a driving force behind this reaction was the simple act of taking a pill. People link the practice of taking medicine as a positive healing influence. Even if they know it's not medicine, the action itself can trigger the brain into thinking the body is being healed.[18]

Among many available studies, here are a couple examples showing the placebo effect:

- *Hair growth in balding men.* Men who believed they were receiving a drug that would increase hair growth actually experienced such growth, even when given an inert substance, a placebo.[19]
- *Fitness and health.* In another study, 84 female room attendants working in seven different hotels between 32 to 40 hours per week, cleaning, on average, 15 rooms per day were measured on physiological health variables affected by exercise. The researchers told half of the cleaners via verbal presentations, handouts, and posters that the cleaning work they do is good exercise and easily satisfies government recommendations for daily exercise and an active lifestyle. Subjects in the control group were not given this information. Although actual behavior did not change for anyone, four weeks after the intervention, the informed group perceived themselves to be getting

STRESS STORIES

All in Her Mind?

One student in the stress management class told us she struggled horribly with fibromyalgia and chronic fatigue. She said both problems were so debilitating that she could barely manage to make it through a day. Her OTC drugs didn't give her any comfort.

When she went to her doctor for help, he ran all the tests he ordinarily would for someone in her condition. After analyzing the results, he told her there was nothing wrong with her; that it was all in her head.

I asked her what she thought of that diagnosis. She said other doctors had told her the same thing.

When she asked this doctor what do do about it, he told her there was nothing he could suggest to help her. He mentioned in passing that she should probably do something about her stress. When she asked him what she should do, he said he was not sure.

Soon she enrolled in the stress management class and started getting relief from both symptoms.

—MH

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

REAL PEOPLE, REAL STORIES

If Only

Aniyah was a graduate student, a wife, a mother of two young children, and a happy, giving person. She was training to run her first marathon when she was struck with a rare and aggressive form of cancer. Aniyah and her family pursued every avenue of treatment, both conventional and unconventional, yet the disease spread.

In her final days of life, Aniyah wondered: "I feel so guilty and responsible. Could I have prevented this by thinking more positively or by having a better attitude? I really believe how I think affects my health, so I keep wondering what I did to cause this."

Although many studies show that in some cases, a positive approach does make a difference, the disease cannot always be prevented. There comes a time when accepting that fact can help make the journey easier.

significantly more exercise than before. As a result, they showed a decrease in weight, blood pressure, body fat, waist-to-hip ratio, and body mass index. The control group showed no similar improvements.[20]

If our thoughts and emotions have a positive impact on health, it makes sense that they also might affect us in negative ways. The **nocebo effect** explains the causation of sickness and death by expectations of these adverse outcomes and by associated emotional states.[21] For example, when people who are susceptible to poison ivy are exposed to a harmless look-alike plant and told it is the real thing, they can develop a rash. Cancer patients experienced hair loss when they were given a totally inert substance and were told it was a powerful anticancer medicine that causes hair loss.[22]

Studies on both the placebo and nocebo effects supply strong support for the connection between thoughts and feelings and physical health. The literature is filled with examples showing the placebo and nocebo effects. As you will learn in Chapter 5, an understanding of the power of our mind has critical implications for stress prevention and management. This information can empower us to understand the role our thinking plays in our health. Expectation affects reality.

Blaming the Victim We cannot conclude this section on placebo and nocebo effects without making an important point about the relationships between body, mind, and disease. Despite our best efforts to manage stress and have a positive outlook on life, illness happens. The mentality that illness is the victim's "fault" is not a productive approach to health. This line of thinking, also called blaming the victim, reinforces the attitude that if the person had just tried harder and believed, he or she could have prevented the illness. Although this may be true at times, a more constructive approach to health is to acknowledge that even though how we think and feel does have an impact on our health, some diseases—and death—are inevitable. There is a 100% chance that we will die. But our thoughts and emotions can make a difference in the quality of our journey through life.

Psychoneuroimmunology

Today, entire areas of science are studying the relationship between body and mind. One exciting field of scientific inquiry explores the chemical basis of communication between the body and the mind as it relates to the nervous and immune systems. This area of study, called **psychoneuroimmunology** (PNI), looks to understand the complex communications between and among the nervous system, the psyche, and the immune system, and their implications for health.

As you have learned, the effects of a compromised immune system are far-reaching, and extend to everything from susceptibility to the common cold, to the rate of wound healing, and even a link to developing breast cancer. The following is a summary of several studies linking stress to its effect on the immune system.

- PNI research has shown that traumatic stress, such as the death of a loved one, can impair a person's immunity for as long as a year.
- Studies of university students and staff in the United States and Spain have implicated stress and a negative outlook in increasing susceptibility to the common cold.[23]

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

- By inflicting small cuts upon volunteers who then were subjected to controlled stressful situations, researchers have shown a significant delay in healing among those with high stress.[24]
- People who were shown films of Mother Teresa consoling the poor and the sick experienced increased levels of salivary immunoglobulin A, one of the body's first lines of defense against invading pathogens. The levels of this substance in children have been shown to increase through relaxation and self-hypnosis. In adults, the levels have been shown to increase when humor is introduced.[25]
- In a thorough investigation of all the research on the relationship between chronic stress and cancer, researchers concluded that stress plays a "prominent role in cancer growth and metastasis." Though there may be many variables involved, one of the most likely culprits is a weakened immune system unable to handle the spreading cancer.[26]
- Dr. Janice Kiecolt-Glaser, a National Institutes of Health-funded researcher, reported that her team administered a small puncture wound to a group of dental school students, doing so once during an exam period and then again during a vacation period. They examined how the wounds healed. All the students took longer (on average, 3 days longer) to heal their wounds during exams than during vacation; the researchers attribute this to stress. "If you're wounded and you're stressed," Dr. Kiecolt-Glaser commented, "you take longer to heal. You also have a greater chance of infection."[27]

There is plenty of evidence now that not only are the immune and the nervous systems physically connected—there are resident immune cells in the central nervous system (CNS) and peripheral nerve terminals in immune organs—but they also share each other's "languages" for their communication.

Dr. Candace Pert says:

> The immune system, like the central nervous system, has memory and the ability to learn. Thus, it can be said that intelligence is found not only in the brain but in cells that are distributed throughout the body, and that the traditional separation of mental processes, including emotions, from the body is no longer valid.

Though they were previously thought to be separate and disconnected, the research clearly shows that the nervous system and the immune system are physically connected—there are immune cells in the central nervous system (CNS) and peripheral nerve terminals in immune organs. They also share each other's "languages" for their communication. [28]

STRESS STUDIES

Psychoneuroimmunology Finds Acceptance as Science Adds Evidence

According to Margaret Kemeny, professor at the University of California, San Francisco, psychoneuroimmunology (PNI) research has exploded, showing that hormones and neurotransmitters released under stress can change immune cell behavior. These different cells have receptors to "hear" the signals, allowing the nervous, endocrine, and immune systems to "talk."

For example, studies with a group of medical students focused on the effects of academic stress and response to a hepatitis B vaccine that would mimic the response to an infectious agent. These studies showed that antibody and immune cell responses were diminished in subjects with more anxiety, higher stress, and less social support.

Source: *S. Benowitz in* The Scientist, *10(16) (1996): 14.*

The evolving research on the connections between the nervous system, psyche, and immune system opens new ways of thinking about how the body, mind, and emotions are intimately interconnected. The science is complex and has tremendous ramifications for how we view health and illness.

4.7 Conclusion

In this chapter, we explored the relationship between the mind and the body to better understand the role of stress in disease and health. We cannot predict which maladies will develop from too much stress in our lives because so many factors are involved. One thing we know with certainty, though, is that keeping the stress response activated increases our risk for many diseases.

The bottom line is that the body is affected by what the mind experiences, and the mind is affected by what the body experiences. Scientific studies supply a solid foundation of scientific evidence explaining the associations between body and mind. In his classic book, *Mind as Healer, Mind as Slayer*, Kenneth Pelletier summed it up: "Generalized, and unabated, stress places a person in a state of disequilibrium, which increases his susceptibility to a wide range of diseases and disorders."[29]

The mind is a powerful weapon in the battle for health. The mind can be both *healer* and *slayer* because thoughts, feelings, and beliefs have profound implications for health and disease. Understanding the power of the mind will empower you to prevent some diseases and to promote optimal health.

ACTIVITY

4.1 Body Signals

Review Think about a health concern that you, or someone you know, might be experiencing right now. Considering the information in this chapter, think of how stress may have contributed to the problem. This health problem may be a headache or insomnia, or something more serious, like depression or ulcers.

1. What is the condition?
2. Based on what you have read in this chapter, explain how stress has either contributed to or caused the problem.

Respond Our body always gives us signals indicating that we are in balance or out of balance (and as we know from Chapters 3 and 4, chronic stress is an imbalanced state). These signals tell us when we've done something good for ourselves, like the way we feel after we've worked out or helped someone with a problem. We also receive signals from our body letting us know when we have chosen unhealthy behaviors, like the hungover feeling from drinking too much, the stuffed feeling from overeating, or the negative feelings following a stressful argument.

1. Consider what your body tells you about the way you've been treating it. Do you feel perfectly balanced and terrific, or like something is not right, and that stress is the culprit? What messages is your body sending you?
2. Next, intentionally take part in healthy behaviors. Examples might include going for a walk with someone you love; eating a balanced, healthy meal, but eating a little less than you usually would; doing something that you thoroughly enjoy with no other motive than to participate in that activity; helping someone who needs some assistance without letting anyone else know about your good deed. Explain the activity that you selected.
3. Focus deliberately on the way your body feels during and after the healthy activity that you selected. What signals does your body give you showing that it was beneficial? Write down your observations.

Reflect Finally, write a paragraph reflecting on how frequently you listen to the feedback your body is giving you. When was the last time you felt terrific? When was the last time your body and mind felt centered, balanced, harmonious, and whole? Explain how you can do more listening to the wisdom of your body to make choices that help you feel tremendous rather than terrible.

Key Points

- Psychophysiological conditions have a mind and a body component that is supported by science.
- Chronic stress is a contributing factor to many illnesses and diseases.
- Medium-term stress results in an array of unhealthy signs and symptoms, including muscle pain, headaches, fatigue, and sleep disturbances.
- Long-term stress may result in serious health problems, including cardiovascular disease, compromised immune function, and digestive disorders.
- Conditions that have a mind and body relationship are called psychosomatic or psychophysiological.
- The placebo and nocebo effects show the power of the mind on the body.
- Psychoneuroimmunology is the field of study that looks to understand the complex communications between the nervous system, the psyche, and the immune system, and their implications for health.

Key Terms

psychological health
allostatic load
bruxism
interleukins
lymphocytes
natural killer cells
psychosomatic
psychophysiological
karoshi
sutoresu
iyashi
placebo effect
nocebo effect
psychoneuroimmunology

References

1. Biography: Dr. Esther M. Sternberg, by Changing the Face of Medicine staff, http://www.nlm.nih.gov/changingthefaceofmedicine/physicians/biography_309.html, Retrieved February 7, 2014.
2. *An Invitation to Health* (16th ed.), by D. Hales (Stamford, CT: Cengage Learning, 2015).
3. "Life Event, Stress and Illness," by R. S. Mohd, *Malaysian Journal of Medical Sciences, 15*(4) (2008): 9–18.
4. Bruxism/teeth grinding, by Mayo Clinic staff, http://www.mayoclinic.com, retrieved April 17, 2011.
5. "Chronic Stress, Glucocorticoid Receptor Resistance, Inflammation, and Disease Risk," by S. Cohen, D. Janicki-Deverts, W. J. Doyle, et al., *Proceedings of the National Academy of Sciences, 198*(16) (2012): 5995–5999.
6. "Understand Your Risks to Prevent a Heart Attack," American Heart Association, http://www.heart.org, January 2018.
7. *You Are the Placebo: Making Your Mind Matter*, by J. Dispenza (Hay House, Inc., 2014).
8. S. Roy, S Khanna, & P. E. Yeh, et al., "Wound Site Neutrophil Transcriptome in Response to Psychological Stress in Young Men," *Gene Expression*, vol. 12, no. 4-6: pp. 1466-1469 (2005).
9. *Wellness Guidelines for a Healthy Lifestyle* (4th ed.), by W. Hoeger, L. Turner, & B. Hafen (Belmont, CA: Cengage/Thomson Learning, 2007).
10. "Accelerated Telomere Shortening in Response to Life Stress," by E. S. Epel, E. H. Blackburn, J. Lin, et al., *Proceedings of the National Academy of Science, 101*(49) (2004):17312–17315.
11. "Social Stress, Visceral Obesity, and Coronary Artery Atherosclerosis: Product of a Primate Adaptation," by C. A. Shively, T. C. Register, & T. B. Clarkson, *American Journal of Primatology, 5*(14) (2011): 468–474.
12. "Chronic Stress, Metabolism, and Metabolic Syndrome," by K. L. Tamashiro, R. R. Sakai, C. A. Shively, et al., *The International Journal on the Biology of Stress, 7*(19) (2009): 742–751.
13. "Stress Can Ravage the Body, Unless the Mind Says No," by K. Fackelmann, *USA Today* (March 22, 2005) p. 7D.
14. "Does Cognitive Behavioral Therapy Change the Brain? A Systematic Review of Neuroimaging in Anxiety Disorders," by P. R. Porto, L. Oliveira, J. Mari, et al., *The Journal of Neuropsychiatry and Clinical Neurosciences, 21*(2) (2009): 114–125.
15. *Molecules of Emotion: The Science Behind Mind-Body Medicine,* by C. B. Pert (New York: Touchstone, 1997) pp. 18–19.
16. "Loneliness, Social Isolation and Risk of Cardiovascular Disease in the English Longitudinal Study of Ageing," by N. K. Valtorta, M. Kanaan, S. Gilbody, & B. Hanratty, *European Journal of Preventive Cardiology, (13)* (2018): 1387–1396.
17. *Mosby's Complementary and Alternative Medicine: A Research-Based Approach* (3rd ed.), by L. Freeman (St. Louis: Mosby, 2009).
18. "Labeling of Medication and Placebo Alters the Outcome of Episodic Migraine Attacks," by S. Kam-Hansen, M. Jakubowski, J. M. Kelley et al., *Science Translational Medicine, 6*(218) (2014):218ra5.
19. "Placebos Prove So Powerful Even Experts Are Surprised: New Studies Explore the Brain's Triumph over Reality," by S. Blakeslee, *New York Times* (October 13, 1998).
20. "Mind-Set Matters: Exercise and the Placebo Effect," by A. J. Crum & E. J. Langer, *Psychological Science, 18*(2) (2007): 165–171.
21. "Nocebo Effects in Clinical Studies: Hints for Pain Therapy," by R. Klinger, M. Blasini, J. Schmitz, & L. Colloca, *Pain Reports, 2*(2) (2017): e586.
22. *The Spirit and Science of Holistic Health,* by J. Robison & K. Carrier (Bloomington, IN: AuthorHouse, 2004).
23. "Stress and Susceptibility to the Common Cold," by B. Takkouche et al., *Epidemiology, 11* (1991): 345.
24. "The Impact of Psychological Stress on Wound Healing: Methods and Mechanisms," by J. Gouin & J. K. Kiecolt-Glaser, *Immunology and Allergy Clinics of North America, 31*(1) (2011): 81–93.
25. *The Spirit and Science of Holistic Health*, by J. Robison & K. Carrier (Bloomington, IN: AuthorHouse, 2004).
26. "Impact of Stress on Cancer Metastasis," by M. Moreno-Smith, S. K. Lutgendorf, & A. K. Sood, *Future Oncology, 6*(12) (2011): 1863–1881.
27. "Researcher Explains Stress-Inflammation Link," by J. Kiecolt-Glaser, *CAM at the NIH, 15*(3) *(*2008).
28. "Learning and Memory … and the Immune System," by I. Marin & J. Kipnis, *Learning & Memory (Cold Spring Harbor, N.Y.), 20*(10) (2013): 601–606.
29. *Mind as Healer, Mind as Slayer*, by K. R. Pelletier (New York: Dell Publishing, 2002).

chapter
5

The Power of Perception

logoboom/Shutterstock.com

> Great men are they who see that spiritual force is stronger than any material force, that thoughts rule the world.
>
> —*Ralph Waldo Emerson*

Is my life really stressful, or is it all in my mind? And if it is in my mind, can I think about things differently and experience less stress?

Why does one of my classmates thrive while balancing a full class load, a job, and an active social life, while another classmate in the same situation burns out?

I feel like I'm being pulled in too many directions, but I don't see that I have many choices.

Learning Objectives

Study of this chapter will enable you to do the following:

5.1 Define perception and explain how it affects your experience with stress.

5.2 Explain cognitive appraisal and cognitive restructuring.

5.3 Describe how the hardiness characteristics of commitment, challenge, and control can be developed to facilitate a more positive perception.

5.4 Discuss how your thoughts activate the stress response, and how stress is, therefore, in your control.

5.5 Describe the relationship between the amount of stress you feel and the level of control you feel.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

Real People, Real Stories

It's All How You See It ***Marcos's Story:*** "I worked hard during high school, both at school and at my job after school at a grocery store. I have always wanted to go to college and knew it was up to me to make it happen. My parents were always supportive, but with four kids to support and not great jobs, I knew early on that I couldn't expect any financial help from them. I really like college and appreciate the opportunity I have to learn and grow. I think college will help me accomplish my goals, and even though it's hard, I'm determined to learn as much as I can and make the most of this opportunity."

John's Story: "College seems like a waste of time to me. The teachers expect too much and don't seem to understand that students want to have a life besides studying. Most of my classes seem to have nothing to do with the real world, and the assignments are a bunch of busywork. This really is a waste of my time."

Marcos and John attend the same university, have the same major, and take many of the same classes. Marcos views school as an opportunity; John sees school as a burden.

Reddogs/Shutterstock.com

5.1 The Weeds Crowd Out the Flowers

Consider this analogy: Think of your life as a garden of flowers; the variety of flowers in this garden represent the variety of your daily experiences.

Interspersed among the flowers are weeds. The weeds represent the symptoms of stress in your life: headaches, muscle pain, difficulty sleeping, irritability, getting sick a lot, and all the other associated stress symptoms.

As they commonly do, once the weeds start to get the upper hand, they choke the flowers, overtake the garden, and turn what was once beautiful into something ugly. Symptoms of stress are like that. They crowd out the adventure and happiness inherent in living day to day.

Typically, when we experience symptoms of stress, we try to do something about the symptom itself—we take medication to make the headache go away; we take sleeping pills to help us fall asleep quickly; we take a drug to try to smother the sickness.

Sadly, this doesn't do anything about the real cause of the weeds. The weeds didn't get there without their seeds reaching the garden first. If we are wise, we will do what we can to get the weed seeds out of the garden. Otherwise, the weeds will grow back after we chop them off above the ground; that is, the symptoms of stress will return. And, frequently, they return as different symptoms.

Beginning in this chapter, we look at the real cause of our stress—the weed seeds—and what we can do to remove them from our beautiful garden. Once the seeds and weeds are gone, we are left with a flourishing garden that's free to grow any choice of flowers.

5.2 The Power of Perception

Have you ever wondered why people react to the same situations differently? Some people get nervous before a test, a big game, or speaking in front of a group of people, while others enjoy the challenge. Could it be genetics, perception, personality, or attitude that makes the difference? Yes, yes, yes, and yes—and probably other reasons, too. Your experience with life's events depends on your strategies for coping with stress, your earlier experience with stress, your genetic makeup, and your level of social support. Most important, however, is how you perceive life events. A shift in perspective is the first critical step toward improving how you experience stress. Understanding how you interpret and perceive incoming information is the key to stopping stress where it starts—in your mind.

But can you change the way you perceive things? Can you learn to *think* differently? Absolutely! Changing the way you think is no small matter, yet this goes to the heart of where your stress begins. In this chapter and the next, we will explore the power of the mind and the power of perceptions. You will learn specific, proven methods to help you *prevent* stress. These tools will help you perceive situations in life more accurately and effectively. You will learn how your mind affects your experience with stress. When you finish reading these chapters, you will know the answers to the following questions:

1. How do my thoughts relate to the way I experience stress?
2. What tools and techniques help manage my thoughts and perceptions to prevent stress and enhance the quality of my life?

Nonoko's story illustrates that individuals can have the same experience but with quite different results, depending on their thinking. Like Nonoko, you can learn to think about the events of your life in a positive, life-enhancing manner to prevent stress and improve your quality of life. Think back to the dimensions of health introduced in Chapter 1. Recall that the mental dimension of health relates to thinking and the emotional dimension refers to feeling. The mental dimension of health is the focus of this chapter.

Nonoko's Story

Once upon a time, there was an old Zen master named Nonoko who lived alone in a hut in the woods. One night, while Nonoko was sitting in meditation, a powerful stranger came to the door and, brandishing a sword, asked Nonoko for all his money. Nonoko continued to count his breaths while saying to the stranger, "All my money is on the shelf behind the books. Take all you need, but leave me 10 yen. I need to pay my taxes this week."

The stranger went to the shelf and removed all the money except 10 yen. He also took a lovely urn on the shelf.

"Be careful how you carry that urn," said Nonoko. "It can easily crack."

The stranger looked around the small, barren room once more, then began to leave.

"You have forgotten to say, 'Thank you,'" said Nonoko.

The stranger said, "Thank you" and left.

The next day, the whole village was in an uproar. Half a dozen people claimed they'd been robbed. When a friend noted that Nonoko's urn was missing, he asked Nonoko if he, too, had been a victim of the thief.

"Oh, no," said Nonoko. "I loaned the urn to a stranger, along with some money. He said, 'Thank you' and left. He was pleasant enough but careless with his sword."

Source: *The Book of Est*, by L. Rhinehart (New York: Holt, Rinehart & Winston, 1976).

5.3 Perception

Perception, a person's cognitive (mental) interpretation of events, is perhaps the most critical aspect in preventing unnecessary and unhealthy stress. Experts who study stress agree that in nearly all cases, events are not what cause us to feel stress; instead, *the way we perceive or interpret those events is what causes us to feel stress.*

Are You in Danger?

Ask yourself this critical question: In the past month of your life, how much of your time was spent in life-threatening situations? Considering every minute, how much of the time was your life really in danger? Perhaps you were in a car accident or some other incident that briefly involved a dangerous situation. Maybe you were hiking and lost your footing on a dangerous path. Perhaps you were at risk of being mugged or attacked. Nearly everyone can recount rare occurrences when they have been in danger—the threat was real and could lead to decisive action necessary for you to avoid possible physical pain or death.

If we consider every waking moment of our lives, we immediately realize that we are very rarely in any kind of danger that puts our survival at risk, or in which we will suffer physical pain from an outside source. Yes, there are exceptions. Some of us live in places where real danger regularly looms large. But for most of us, if we analyze our circumstances accurately, we must acknowledge that our lives do not involve many life-threatening experiences.

In the earlier chapters, you learned that the stress response begins with a thought—a perception of a threat. The thought sends an initial message to your various body systems that you are in danger. This message activates a state of physiological arousal—the fight-or-flight response, an automatic reaction to the threat and to the assumption that you are in danger.

Refer to the Stress-o-Meter self-assessment that you completed in Chapter 2. This was a general assessment of the level of stress you felt during the last month. You gave yourself a ranking between 1 and 10. What was your score? Was it higher than a 2 or 3?

At this point, we must ask the critical question: If you are in real danger so infrequently, and if you have so few genuinely threatening experiences when you need extra energy, speed, or power to survive physically, why would you report any score higher than 2 or 3 on the Stress-o-Meter? Remember, the only purpose of the stress response is to keep you alive. But if you are in danger so rarely, why would you need to activate the stress response? To be honest, why would you ever feel stressed?

STRESS STORIES

How Stressed Are You *Really*?

In my classes, I begin this discussion by asking each student the following question: "In the past month, how much of your time did you find yourself in situations where your life was really in danger?" Usually, three or four students have gone through something serious like being in a car accident or running out of air while scuba diving. One student told me she was camping, and a big brown bear really did show up in her campground.

As I go around the room asking this question, I do some math. A class usually has about 30 students, and I multiply that number by 30 days in a typical month, multiplied by 24 hours in a day, multiplied by 60 minutes in an hour. This adds up to 1,296,000 total minutes of life accumulated by the members of our class during the last month. Then I add up the number of minutes they spent in situations when their life was legitimately in danger. The top number for a class total so far is 15 minutes.

Continuing with the math, I take the number of minutes during which the class experienced stress from actual danger and divide that number by the total number of minutes lived during the last month. The results invariably come out to be far less than 1%. Then I ask the students what percentage of their time they feel stressed. They report anywhere from 30 to 90% of each day feeling unpleasant stress. But why would they feel any stress if they are so rarely in danger?

At this point, I usually ask someone from the class to come to the front of the room and stand beside me. Let's say I have chosen Simin. I ask her if she knows "The Star-Spangled Banner." I tell her to think of that song, so she is clear how it goes. Next, I ask her to sing that song to the rest of the class at the very top of her lungs, much like the singer does at the beginning of a major league baseball game—just barrel it out!

Occasionally, someone will be courageous enough to go for it, but most of the time the students become red in the face (either in anger at me or in embarrassment, or both), fidget a lot, and try to talk their way out of my request for them to sing.

After a few long moments, I ask Simin to sit down and thank her for volunteering. Then I ask her this important question: "Simin, if you were at home and nobody else was around—in other words, you knew nobody would hear you—perhaps you were in the shower or vacuuming your house, would you have any problem singing 'The Star-Spangled Banner' at the top of your lungs?"

Invariably the response is, "No, I would have no problem if I were at home all by myself."

My next question to the class is this: "What is the difference between singing the song at home and singing the song in front of a classroom full of people? Aren't you singing the same song in both places? You're essentially doing the exact same thing both times."

I ask Simin what first thought went through her head when I asked her to sing. Usually, it is a sense of panic. Simin will report that she felt her heart rate increase, her breathing change, her face become flushed, and several other internal sensations, all of which are natural responses when we feel like we are in danger. But her life was not in danger in any way up there in front of the class.

I next ask the students to name a few stressors—events they think cause them to feel stress. They usually respond with things such as finances, homework, tests, not enough time to do everything, or family and relationship problems. Then I choose one of those stressors, such as taking tests. I ask the class if it is possible for them to study for and take a test without feeling any distress.

"No way!" is the familiar roar in return.

I rephrase the question: "Even though it may not be likely, is it humanly possible for someone to study for and take the test without feeling any anxiety?"

A few students usually have caught on by now, but the most vocal ones still emit a resounding "Impossible!"

Then I ask the students if I, as a teacher at the university, would feel any stress if I were to take the test. What if I were to study hard and then take the test? Or what if my 6-year-old son were asked to complete the test? Why would he or I feel any stress about taking the test? Soon, most students have figured out that the test itself is not the cause of their stress.

—MO

Stress Comes from Within

As portrayed by the student who was asked to sing in front of the class, the chronic stress that we feel is very rarely the result of a genuinely threatening situation. The point of that example was to demonstrate that our stress almost always stems from situations that are not, by their nature, dangerous. The outcome that we think will do us harm usually doesn't. As a result, we create in our bodies a false sense of emergency.

This leads to an important conclusion about the stress we feel: *The perception or the interpretation of an event initiates the fight-or-flight response. The event itself is not what causes us to experience stress.* As stress theory has evolved, the notion that human stress is a direct response to an external stimulus is no longer credible. Whether we feel stressed seems to depend on how we view what happens. Our interpretation of stressors, not the stressors themselves, activates our stress.

In his book *Creating Health*, Deepak Chopra explains that we assume that stress is something outside of us; that stress is speed, noise, and chaos. This view is in error, he says. Stress comes from within. Chopra quotes Dr. Daniel Friedman, an authority on stress:

> Stress is a coupled action of the *body and mind* involving *appraisal* of a threat, an instant modulation of response. The triggering mechanism is the individual's *perception* of threat, not an event. Perception is modified by temperament and experience.[1]

fizkes/Shutterstock.com

Public speaking feels like a stressful experience.

Dr. Friedman goes on to say that we all respond to external threats in our own way, depending on our previous level of arousal and ability to adapt. Appropriate stress helps us grow. Inappropriate stress, by contrast, serves no useful purpose and may lead to health problems and disease.

Whenever we sense a potential for pain or danger of any kind—emotional, social, spiritual, or physical—our body reacts in its perfect way to help us survive. *The only way the body knows to do this is by turning on the fight-or-flight response.* We don't have any other natural way to deal with a perceived threat. Yes, we can learn other ways, but our body inherently knows only one way that is immediate, fast-acting, and guaranteed to produce powerful results.

Think of a "stressful" test, quiz, or exam. The reality of an exam is that it has no power to turn on the fight-or-flight response. It is merely a piece of paper with words printed on it. The stress is based entirely on what that test means to us and how we interpret it. If a stranger—someone who wasn't in the class—were to be given the same test, she would probably interpret it as some interesting questions with no other meaning to her personal well-being. Students who feel stressed about a test are the ones who interpret it as threatening to their future because a low score might result in "bad" outcomes down the road.

> If you are distressed by anything external, the pain is not due to the thing itself but to your own estimate of it; and this you have the power to revoke at any moment.
>
> —*Marcus Aurelius (121–180 AD)*

5.4 The World Is NOT a Stressful Place

The summarizing point and the essential idea in preventing stress is that *no event in life is inherently stressful.* No event in life causes stress universally for everyone. Instead, we make stressful *interpretations* of the events of our days. We decide that some aspect of the situation will inflict pain or discomfort, which may be physical, emotional, or spiritual. We view the situation as a potential threat to our sense of well-being and comfort.

This understanding shifts the influence of what causes stress from external factors to internal control. Although some situations, such as a tsunami, a hurricane, an incurable illness, or being attacked, are interpreted as stressful almost universally, we still have the power to take control of how we interpret any event in life.

This concept might be easy to capture intellectually, but to make it a functioning principle in daily life is quite another thing. We are not trained to think this way. From our earliest days, we are taught accepted statements such as the following:

- This test is stressing me out.
- You make me mad.

> Stress is an ignorant state. It believes that everything is an emergency.
>
> —*Natalie Goldberg*

- This class makes me bored.
- He hurt my feelings.
- She is so irritating.
- Life is stressful.

We accept the mistaken notion that what happens outside of us determines how we feel inside. Life events happen, and our reactions seem automatic.

The following real-life scenarios show how interpretation and perception are the deciding factors in the outcome.

> Lindsay steps up to the foul line, puts the basketball in her shooting hand, lofts the ball into the air, and watches it sail through the hoop. She scores. When would this situation—standing at a foul line shooting foul shots—be stressful? One answer would be when she is shooting to win an important game. If she misses, her team loses.
>
> In our culture, we have decided that losing is painful. When will this not be stressful? Lindsay probably will feel no stress when she is in her backyard shooting free throws by herself. She is doing the same thing in both situations (at the end of the game or in the backyard). The only reason one is stressful and the other is not is because she interpreted one differently than she interpreted the other.
>
> During the game, Lindsay is thinking of all the negative consequences if she misses. Because she thinks about avoiding future pain, her body automatically turns on the stress response. When she practices in her backyard, she doesn't sense any adverse consequences if she misses. In the absence of any perception of potentially negative consequences, the stress response won't activate. The way she has interpreted the event is the crucial point.

See if you can relate to the following example:

> Imagine that you are driving down a narrow, winding road behind someone who is driving slowly. You are in a hurry, but she is not. Imagine that you are late for an important exam. This exam is so important that you may fail the course if you arrive late. You are definitely in a rush. The driver in front of you, however, is on a leisurely drive with her husband and kids.
>
> Now imagine that an elderly man pulls out just in front of this family. He is in even less of a hurry than the family in the car in front of you. The driver in front of you slows down so that her car doesn't run into the old man. You are forced to slow down as well.
>
> The speed at which this man is moving is driving you bananas. Soon you are in a rage, pounding the steering wheel, honking your horn, shaking your fist. Your face has turned red, and you are noticeably irate. If we ask why you are so upset, you might say something about how that man is making you stressed out. He upsets you because he is driving too slowly. In reality, you are upset, stressed, and out of balance because of how you are interpreting the situation. The older gentleman isn't making you feel stress.
>
> How can we be so sure? Because the other driver, the one with her family in the car, is on the same road, driving at the same speed behind the same slow-driving man, and she doesn't feel upset, out of balance, or the least bit stressed. Why not?
>
> These two drivers are not stressed because they have interpreted the situation differently. The second driver may see the situation as an opportunity to move even more slowly so she can catch more of the wonder of this beautiful drive. You interpret the slow-driving man as a significant hindrance to you. In his thoughtless leisure, he is causing you to flunk your test. That thought, for you, is painful. The event is not what causes you stress. What causes you stress is the meaning you give to the event.

Everything in life is but a challenge. Challenges can never be good or bad; we make of our challenges what we will.

—*Toltec Teachings Book*

Events themselves are not inherently stressful. This idea is illustrated concisely by a Taoist story of a farmer whose horse ran away:

> Upon hearing the news, all the neighbors came over to lament the loss. "What bad fortune!" they exclaimed, to which the farmer's reply was, "Maybe."
>
> The next morning the farmer awoke, and to his surprise, he saw his horse had returned, and with it had come six wild horses. The neighbors came over, and with astonishment, congratulated the farmer on his good fortune.

> The farmer's reply was simply, "Maybe."
>
> The following day, the farmer's only son was trying to saddle and ride one of the new horses when he fell off and broke his leg. Again, the neighbors came to offer their sympathy for the misfortune. Again, the farmer simply said, "Maybe."
>
> The next day, officers from the army came to recruit every young man to help fight in the war, but because of his broken leg, the farmer's son was rejected. When the neighbors came in to say how fortunate the father was that everything had turned out, his reply to them was, "Maybe."[2]

As you can guess, this story goes on and on. The events did not make the farmer feel a certain way. How he interpreted them led to his calm attitude toward events that others viewed as tragedies.

In short, the examples provided in this chapter are intended to emphasize the idea that events in the surrounding environment are not what trigger stress in most people; interpretations are what actually activate the stress response.[3] When we feel stress, we do it to ourselves. Knowing this one thing gives us full power to *undo* it. If we feel stress, we can immediately claim responsibility and take decisive measures to stop the stress. This puts us back in control! Cognitive restructuring will help you learn how to make this happen.

5.5 Cognitive Restructuring

Cognition is a mental process that consists of thinking and reasoning skills. The ability to think and learn makes us uniquely human. It enables us to be rational, to make sound judgments, to interpret the world around us, and to learn new skills. Without cognitive functions, we could not understand our daily lives, adapt and make changes, and develop the insight to make those changes.[4] Cognitive functioning allows us to react independently to the same situation. **Cognitive appraisal**—our interpretation of a stressor—is the deciding factor in our reaction.

Cognitive restructuring refers to the mental act of changing the meaning or changing our interpretation of the environmental events in life. This is sometimes called **reframing.** This approach substitutes our perceptions of situations from thoughts that are threatening to thoughts that are nonthreatening. The source of excess stress is **cognitive distortion,** in which interpretations become distorted and magnified out of proportion to their seriousness. Cognitive restructuring involves first awareness, and then correction, of these distorted, mistaken thoughts.

> Point of Positive Perception = Prevention.
>
> *—MH*

STRESS STORIES

POPP Formula for Prevention

Over the years, I have taught stress-management workshops in large corporations and in small churches; to nurses, teachers, farmers, students, and executives; from coast to coast and overseas. One of the essential ideas in every workshop is this: Your perception becomes your reality. I developed the POPP formula for stress prevention to help participants in my workshops remember this critical concept.

POPP is an acronym for Point of Positive Perception. Let this idea POPP into your mind every time you find yourself in a potentially stressful situation:

- There is an actual **point** in time when your thoughts activate the stress response.
- You can choose a **positive** thought to respond to the events in your environment.
- This positive **perception** will stop the stress response from activating.
- You have **prevented** unhealthy and unproductive stress.

There is power in the simplicity of this formula. We are not talking about managing stress or coping with stress. We are talking about preventing stress. Try POPP thinking for a day. Your day will go better.

—Margie Hesson

© Brian A. Witkin/Shutterstock.com

Bethany Hamilton turns problems into opportunities.

5.6 Hardiness

Research[5] suggests that the combination of three personality traits works to dramatically reduce the perception of stress in individuals having these traits. The premise is that some individuals have attitudes that facilitate a more positive perception of daily events. **Hardiness** is the term used to describe this combination of personality characteristics and includes the traits of commitment, challenge, and control. A hardy individual is someone who:

1. Views potentially stressful events as interesting and meaningful (commitment)
2. Sees change as healthy and as an opportunity for growth (challenge)
3. Perceives oneself as capable of having an influence on events (control)

Individuals strong in *commitment* believe in the truth and value of who they are and what they do. They have a sense of meaning and purpose in work and relationships. Therefore, they stay committed and deeply involved rather than allowing themselves to become alienated by fear, uncertainty, or boredom. The term *challenge* reflects an outlook on life that enables an individual to perceive change as an opportunity for growth rather than a threat to one's sense of security or survival. Change, rather than stability, is seen as the standard mode of life. The term *control* reflects a belief that one can influence the course of life events within reasonable limits. Hardy individuals have an internal sense of personal mastery, confronting problems with confidence in their ability to implement practical solutions.[6]

Studies suggest that the hardy personal traits of commitment, challenge, and control can be learned. Understanding hardiness characteristics is important because if you don't always perceive situations in the most constructive manner, these are areas you can focus on to improve your perceptions. In the pages to come, you will learn more about how to develop these traits to help you gain a more positive perspective on the events that contribute to your stress.

Commitment—Turning Problems into Opportunities

It is not what happens to you in life, but what you do with what happens to you in life that determines the outcome. Bethany Hamilton, at 13, lost her arm and nearly lost her life in a vicious shark attack. One month later, she was back on her surfboard with a determined spirit and a positive attitude. Two years later, she won first place in the Explorer Women's Division of the NSSA National Championships. Listen to what she said about dealing with this freak accident:

> My plans to be a professional surfer got hit pretty hard on that Halloween morning. It was my own personal tsunami. In the days, weeks, and months that followed I had a lot of cleaning up to do. Often, it was scary or trying. And I won't lie to you: in some ways it still is. I've worked hard to become a pro surfer and am now competing with the best women surfers in the world.[7]

Although Bethany experienced a seemingly horrific setback, she remained true to her goal of becoming a world-class athlete. Commitment and your ability to view potentially stressful events as interesting and meaningful influences your perception, and your perception becomes your reality. Bethany's story clearly illustrates that an event such as having your arm bitten off by a shark, which generally would be considered horrible luck, can be interpreted as a positive, life-enhancing gift. Her commitment to finding meaning and purpose through this life-changing experience affected her perception and the quality of her life. The accident is not what causes stress. The meaning we give to the accident is what determines the outcome. So, even when we cannot change many things that happen to us, we can improve our perception.

Challenge—Change as Challenge Rather Than Threat

You probably have heard the aphorism, "The only constant in life is change." Yet many people find change unsettling. Change can disrupt the normal flow of life and create a stressful

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

CULTURE CONNECTION Fear of Failure

In his early twenties, Walt Disney was fired from a Missouri newspaper for "not being creative enough." Then in 1921, Disney founded his first animation studio, Laugh-O-Gram Studio, in Kansas City, Missouri. It went bankrupt within two years. It's only after this failure that Disney decided to move west to pursue his dreams in Hollywood. The rest, as they say, is history. After picking up the pieces from his past failures, Disney had found the Disney Brothers Cartoon Studio, which had later become the Walt Disney Studio, in 1923. Over the course of his life, Disney had received 59 nominations for the Academy Awards, winning 22 of them.

As Walt Disney said in 1957, "All the adversity I've had in my life, all my troubles and obstacles, have strengthened me… You may not realize it when it happens, but a kick in the teeth may be the best thing in the world for you."

Source: "4 Famous Failures that Became Successes," by M. Grothaus, in *Fast Company,* August 2018, retrieved on November 27, 2019, from https://www.fastcompany.com/90217870/4-famous-failures-that-became-massive-successes.

Collection Christophel/Alamy Stock Photo

environment. One must be prepared for change because change will happen whether we want it to or not. You can adopt one of two reactions to change: Either resist and fear change, or embrace it and see new opportunities for growth in it. The first way leads to frustration, anger, and bewilderment, the other to excitement, awe, and challenge.

In Chapter 4, you learned that stress is a threat to the body's equilibrium and can result in a decline in health. Yet in his book, *Spark: The Revolutionary New Science of Exercise and the Brain*, Dr. John Ratey explains that stress can also be a challenge to react, a call to adapt. He proposes that what could be missing on advice about reducing stress in modern life is that challenges are what allow us to strive and grow and learn.[8]

Challenges create physiological and psychological conditions for us to perform at our best and engage fully. When you approach life with a more accurate interpretation of events around you, this positive perception halts the activation of the stress response, and you also learn that you can turn problems into opportunities to reawaken your enthusiasm for life.

Thomas Edison positively perceived things when he said, "I have not failed 10,000 times. I have successfully found 10,000 ways that will not work." It's all how we look at things.

Control

An essential aspect of how we perceive our environment has to do with the level of control we feel over our environment. Not only is control one of the characteristics of a hardy personality, but it is also key to understanding how you view the events in your life. Think of **control** as a deeply held belief that you can directly affect a situation. There is a relationship between the amount of control we think we have and the corresponding amount of stress that we feel. The more control we think we have over our circumstances, the less stress we tend to feel. As our sense of control diminishes, stress levels tend to rise.

FYI

Robert Sapolsky, Stanford neurologist, studied baboons living in the wild in Africa. He looked specifically at the stress hormone cortisol hormone and the pleasure hormone dopamine as he observed the baboons in their natural setting. One of his findings was that a lack of control is not always stressful. He summarized, "If your lack of control occurs in a setting that you perceive as malevolent and threatening, lack of control is a terrible stressor. If the lack of control occurs in a setting perceived as benign and safe, lack of control feels wonderful." This may be why we gravitate toward adventurous situations like amusement parks, skydiving, whitewater rafting, and other out-of-control experiences. We are pretty sure we won't get hurt or die. When we do those things, we get a boost of dopamine. However, if the out-of-control situation might end up killing us, we secrete the stress hormone cortisol instead.

Source: Go Wild: Eat Fat, Run Free, Be Social and Follow Evolutions' Other Rules for Total Health and Well-Being, *by J. J. Ratey & R. Manning (New York, NY: Little, Brown and Company, 2014).*

Stress is a response and therefore can be controlled. All it requires is changing your perception of what truly requires a stress response. You have the power to control the stress in your life. Decide to control the stressor; don't let the stressor control you. Since we cannot change reality, let us change the eyes which see reality.

—*Nikos Kazantzakis*

To understand this concept of control, let's explore what can and can't be controlled. There are some things in life over which we have no control, such as the stock market; natural phenomena such as weather, earthquakes, and storms; and some forms of disease. We do not have control over other people. Although we can influence others, we do not have control over their thoughts, feelings, or actions.

We do our best to try to control how someone thinks, feels, and acts. As examples, we may act like a martyr or try to make someone feel guilty or angry in attempts to control his or her thoughts and feelings. Ultimately, we do not have the power to control anyone else, even though we may spend a lot of time trying. The healthy response to things over which we have no control is acceptance, allowance, and a go-with-the-flow attitude.

By contrast, we do have total control over some things that are related primarily to us—our thoughts, feelings, behaviors, and actions. At times, we may not feel that we are in control of these things, like an addiction, but in the end, nobody but you can control your inner life. Your perception of what happens in your life has a lot to do with whether you believe you are in control and have power over what is happening, or whether you believe external factors control your life.

Self-Limiting Beliefs In between things over which we have no control and those over which we have total control are various situations over which we have some degree of control. In many instances, we have much greater control than we realize. But instead, we often create beliefs, or feelings of certainty, about our limitations. For example, we might have a belief that we are not smart enough or capable enough to go to graduate school. We tend to act on that belief and not achieve what we would like to. The belief that we couldn't possibly be a concert pianist—even though this would be an appealing goal—may stop us from even trying to learn how to play the piano.

Thinking in this way comes from a mistaken notion that a person cannot carry out a specific task. These are called **self-limiting beliefs.** Our culture promotes beliefs that prevent people from pursuing worthy goals. Some examples of self-limiting statements are as follows:

- I'm too old.
- I'm too young.
- I'm too fat.
- I'm not smart enough.
- I'm too shy.
- I'm not strong enough.
- I don't have enough willpower.
- I won't be successful, so why try?
- I can't control how I feel when this or that happens.

Statements such as these are usually not accurate self-assessments, but because we believe them, we tend to act on our beliefs and bring about results that coincide with the limiting beliefs. Psychologists call these types of beliefs **premature cognitive commitments.** We commit prematurely to a mistaken belief about ourselves. Richard Bach made an astute statement about what happens when we have these self-limiting beliefs: "Argue for your limitations, and sure enough, they're yours."[9] Our beliefs become our reality, regardless of how true or false they may be.

If the need or desire is high enough, we can control a lot more than we think. If someone were to give you a thousand dollars to sit next to a crying baby during a 2-hour airplane flight, or to wait patiently in the supermarket line while the woman in front of you spends 20 minutes digging through her coupons, or to listen to the guy next to you in the library smack and pop his gum while you try to study, could you do it? Of course you could. Could you do it without feeling stressed? Suddenly it isn't so awful, is it? Events that seem irritating and stress-producing

TIME TIP

"I face so many challenges every day that I was constantly exhausted. To help manage my time, I started to take a 'time out' every day. I write it in my planner, so I have one hour just for me—for exercise, casual reading, soaking in the tub, or napping in the sun. This time out gives me a chance to relax and return refreshed and ready to face the challenges."

—Jenny M.

take on new meaning when you look at them from a different perspective.

When we are highly motivated, we can take control and prevent the event from starting the stress response. If you could control your stress response for a thousand dollars, would you do it for a lifetime of less stress and better health? Again, we see the principle of perception and interpretation at play in all events.

Locus of Control One more concept related to control, known as **locus of control (LOC),** refers to the extent to which we believe that we can control events that affect us. It is the way we credit our chances of success or failure in a future venture to either internal or external causes. People with an **internal locus of control** see themselves as responsible for the outcomes of their own actions. People with an **external locus of control** believe that whatever happens to them is unrelated to their own behavior—making it beyond their control.

Your perception of control has a profound impact on your motivation and your health. Researchers theorize that as far as a sense of control is concerned, a person is somewhere along a continuum of internal and external control. For example, if your thinking is more toward the internal LOC end of the continuum, you might say, "The grade I receive in this class is entirely dependent on the work, study, and effort I exert toward each of the assignments and tests." People with an internal LOC tend to take part in behaviors that positively affect their health, such as exercising, eating healthy food, and doing relaxation exercises.

If you tend to think from a more external LOC perspective, you might think or say, "I'll get a good grade in this class because the teacher likes me or is in a good mood when she's giving out grades." People with an external locus of control would consider the condition of their health as being independent of their behaviors. If they stay healthy or get sick, it is because of luck, chance, or circumstances.

People with a tendency to think from an internal LOC perspective are more likely to take responsibility and believe they can influence what happens to them. Moving toward this style of thinking will positively affect your ability to reduce stress in your life. If you think you can control the stress you experience, you are well on your way to doing so. This idea relates to the next concept we will discuss: self-efficacy.

Self-Efficacy Changing our perceptions depends on the belief that we can change and will succeed. **Self-efficacy** describes the confidence in our ability to realize a goal or change a behavior. When we genuinely believe we can do something, we often find we can. Have you read the children's story *The Little Engine That Could*? The little engine is famous for saying, "I think I can, I think I can, I think I can," as it pulls the train up the mountain. This is self-efficacy. The little engine did not say, "I wish I could" or "I might be able to" or "I hope I can" or "No way—I'm too small." If you have the courage and the faith to believe in yourself and your abilities, you can control the stress in your life if you think you can.

You might be saying to yourself that this does sound nice, but it isn't that easy to change how a person thinks about things. True, it isn't easy, but people can and do take control of their thinking and their perceptions every day. As a result, they change their behavior, even related to the most difficult-to-change thinking patterns.

All around us we see people who quit smoking, people who stop taking drugs, people who end being angry, and people who change many other behaviors that some believe are nearly impossible to replace. Many people come to realize the control they have over their thoughts and feelings. They recognize that they are not at the mercy of forces outside of themselves. Regardless of the environmental situations, these people can control their thoughts and, therefore, their feelings and behaviors.

STRESS STUDIES

Out of Control

Job stress can raise blood pressure over the long term, according to a study in the *American Journal of Epidemiology.* Men working 25 or more years in a demanding job where they felt they had little control had higher blood pressure at work and home than those who felt they had more control. The deterioration of health was not a result of the job itself but, rather, to the lack of control the worker felt. Feeling in control of our life reduces the unhealthy physiological changes induced by the stress response.

Source: *"Life-course Exposure to Job Strain and Ambulatory Blood Pressure in Men," by P. Landsbergis, P. Schnall, T. Pickering, K. Warren, & J. Schwartz, in* American Journal of Epidemiology, 157*(11), (2003): 998–1006.*

Alan Klehr/Getty Images

Perceived lack of control contributes to job stress and health problems like high blood pressure.

As we were discussing this concept of control in class, one student offered an enlightened insight: "If you have control over something, there is no need to worry about it. If you can't control something, there is also no need to worry about it. There is nothing else . . . so there really is *nothing to worry about*." These are wise words. Understanding this balance is the key to preventing stress.

fizkes/Shutterstock.com

Feelings of control and self-efficacy help prevent stress.

FYI

An Oldie but Goodie

The renowned theologian Norman Vincent Peale wrote the classic treatise on positive mental attitude. His book, *The Power of Positive Thinking*, has sold more than 3 million copies. He offers the following timeless tips:

- You can have control over your life.
- You can get farther in life if you have a hopeful outlook.
- You can create your own luck.
- The only person who can change you is you.
- Believe in yourself! Have faith in your abilities!

Source: The Power of Positive Thinking, *by N. V. Peale (Upper Saddle River, NJ: Prentice-Hall, 1952).*

5.7 Putting It All Together

What can we do with this chapter? How can we apply the information? When we find ourselves becoming tense, we can ask ourselves the following questions to help diffuse the stress response.

1. *Is this stressor real?* Am I really in danger, or am I just imagining or creating the danger or pain? Am I safe? If we look at the situation with an accurate eye, we find that rarely is the danger or pain real. This does not mean that the things we involve ourselves in are not necessary and worth pursuing. What it does mean is that we can do the essential things that we choose to do without the added anxiety levels and accompanying stress. If we do not sense any danger, if we recognize that we are safe, we will not feel any threat and, as a result, the stress response will not activate to prepare us for any potential of peril. We then can function in a more balanced way.
2. *Can I handle this situation without physical pain or dying?* One sure source to determine if we can handle something, and therefore diffuse the need to turn on the stress response, is our past experience. We have taken hundreds of tests, met thousands of people, done many unknown things that seemed scary at first, and we have survived them all. Why should this situation be any different? If we can handle it, there is no need to feel threatened by it. Our experience tells us that we can handle most potentially stressful situations successfully.
3. *Can I think about this differently?* As events happen, we have a choice about how we view them or what they mean to us. Depending on how we interpret the situations will lead to feelings of calmness or stress. In Chapter 6 we expand on this idea.

> We can complain because rose bushes have thorns or rejoice because thorn bushes have roses.
>
> *—Alphonse Karr*

STRESS STORIES

An Immediate Change in How We Viewed the Situation

We had been waiting 45 minutes beyond the scheduled start time for my daughter's soccer game to begin. As each minute passed, the fans along the sidelines were getting angrier and angrier because the referee was late. The shared attitude of the crowd was "How could this guy waste our day like this?" They were furious that he would take so long to arrive. I heard many comments about all the mean things these parents were going to say and do to this guy when he finally decided to show up.

Then came a phone call from the referee to one of the other referees in the game. It turns out that his son had been in a terrible car accident and he needed to deal with the affairs of that situation before he could come to the game. Upon hearing this news, instantly a collective change in attitude toward this man occurred. One moment he was an evil person who deserved the largest amount of wrath they could throw at him. And the next moment, he was the subject of their greatest sympathies. A change in how they looked at the situation completely changed the way they felt about it.

—MO

STRESS BUSTING BEHAVIOR

A New Way of Thinking

Practice incorporating the following new modes of thinking into your everyday life:

1. "I don't need to be stressed about this. I'm not in any danger. I'm safe."
2. "It's not a problem, it's a challenge and a chance to grow."
3. "It's not a failure, it's a learning experience."
4. "Change is good. It brings new opportunities."
5. "I can't control how others behave, but I can control the way I think about it. And I can give others the benefit of the doubt."
6. "I think I can!"
7. "I am in control of my own destiny."
8. "I never think, 'I'm too old,' or 'I'm not smart enough,' or 'I could never do that.' I can do anything if I put my mind to it."
9. "Success depends on me; I am the one in control."

Which of these are already part of your usual mode of thinking (list the numbers)?

____

Which of these modes of thinking will be most difficult for you to adopt (list number)?

____

Pick one mode of thinking and consider a recent experience where it would have helped if you had used it.

____

____

____

____

5.8 Conclusion

Here is how perception and interpretation affect our stress:

1. Perception, or interpretation, is the first step toward stress-response activation.
2. Events are perceived as stressful if the situation is perceived as life-threatening or potentially painful.
3. Most of us are in real danger less than 1% of the time; therefore, we rarely need the stress response for protection.
4. By changing how we interpret events, we can prevent the stress response from activating.
5. Preventing unnecessary stress will promote health, improve quality of life, and avoid disease.

If you allow it, stress can bring out the best in you. You can view the changes in your life as energizing opportunities to gain experience—as challenges rather than threats. Recognize that your perception becomes your reality. Embrace the powerful idea that you, and you alone, are in control of your thoughts, and that you can learn to think in a positive, stress-preventing manner. Learn to let go of the stressors that are not in your control. The bottom line is that you have a choice about whether life events will cause you stress. You can decide whether the stressors in life will control you or you will control the stressors.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

ACTIVITY

5.1 POPP

Review and Apply Review and apply the POPP formula for prevention. For 1 day, deliberately focus on applying the POPP formula every time you feel your stress response begin to activate. When you feel yourself becoming stressed, stop and deliberately think of how you can perceive the situation in a positive manner, so the stress response never activates. Use a cue, like wearing a special ring or switching your watch to the other wrist, to remind you that you are applying the POPP formula for the day. You need to really be alert to the events that start your stress response, and you need to think carefully about how your reinterpretation of that event can change the outcome for you. Here is an example:

> *Adam experienced stress on a daily basis due to the lack of parking spaces at his university. This was not a good way to start his day. Adam applied the POPP formula when he was driving around the parking lot looking for an open space. At the point when he began to feel his hands gripping the steering wheel and his thoughts turning to frustration, he took a deep breath and deliberately changed his perception of the situation. He reminded himself that he could park a few blocks away. This would allow him to get some exercise, enjoy a nice morning walk to class, and appreciate the beautiful morning. He prevented his stress response from activating.*

1. What cue did you use to alert yourself deliberately to think of positive responses to potential stressors?
2. Describe the events you encountered throughout the day that would typically start your stress response and your usual way of perceiving the situation.
3. Explain how you changed your thinking (perception) in each situation to improve your outcome.
4. Explain your experience with applying the POPP formula. Include how you felt when you positively perceived potential stressors as opposed to how you typically feel when you respond by becoming stressed.
5. At the end of the day, reflect on how applying the POPP formula affected your day.

ACTIVITY

5.2 Locus of Control

Identify Identify each of the following statements as representing either internal or external LOC thinking. Use "I" for internal examples and "E" for external examples.

________ 1. "I flunked my psych exam because the teacher didn't tell us what to study."

________ 2. "I wouldn't drink so much if my parents didn't put so much pressure on me."

________ 3. "I didn't get enough sleep last night because I didn't organize my time and set my priorities."

________ 4. "I didn't get enough sleep last night because my teachers give too much homework."

________ 5. "I gained 3 pounds last week because when my sister visits, we just have to go to the all-you-can-eat pizza buffet."

________ 6. "I gained 3 pounds last week because I overate and didn't exercise."

________ 7. "I was late for class because this university does not provide enough parking for students."

________ 8. "I was late for class because I did not get up in time to allow for unexpected emergencies."

Consciously watch your thinking and talking for a day to determine how your thinking affects your level of stress. Do you tend to think with more of an internal or external LOC focus? Select one specific situation you can shift from external to internal LOC.

(Results: External—1, 2, 4, 5, 7. Internal—3, 6, 8)

Key Points

- Understanding how the mind interprets and perceives incoming information is the key to preventing stress.
- The perception or the interpretation of an event, rather than the event itself, sparks the fight-or-flight response.
- Most of us are rarely in actual danger, yet because of our perception we often feel stressed.
- When our motivation or desire to change is high enough, we can control more than we typically think we can.
- Self-limiting beliefs can negatively affect perception.
- The hardiness characteristics of commitment, challenge, and control can be developed to facilitate a more positive perception.
- Locus of control explains the extent to which a person believes he or she can influence the external environment.
- Self-efficacy describes the belief in one's ability to realize a goal or change a behavior.

Key Terms

perception
cognition
cognitive appraisal
cognitive restructuring
reframing
cognitive distortion
hardiness
control
self-limiting beliefs
premature cognitive commitments
locus of control (LOC)
internal locus of control
external locus of control
self-efficacy

References

1. "Development of Anxiety: The Role of Threat Appraisal and Fear Learning," by J. C. Britton et al, *Depression and Anxiety 28*(1) (2011): 5–17.
2. *Tao: The Watercourse Way*, by A. Watts (New York: Pantheon Books, 1975).
3. "Stress-induced Cortisol Is Associated with Generation of Non-negative Interpretations during Cognitive Reappraisal," by H. Tsumura et al, *BioPsychoSocial Mdicine 9*(23) (2015).
4. "The Basics of Cognition and Mental Processes," by K. Cherry, retrieved November 27, 2019, from https://www.verywellmind.com/what-is-cognition-2794982.
5. "Resilience, an Evolving Concept: A Review of Literature Relevant to Aboriginal Research," by J. Fleming & R. J. Ledogar, *Pimatisiwin, 6*(2) (2008): 7–23.
6. "The Relationship of Hardiness, Coping Strategies, and Perceived Stress to Symptoms of Illness," by M. Soderstrom, C. Dolbier, J. Leiferman, & M. Steinhardt, *Journal of Behavioral Medicine*, *23*(3) (2000).
7. http://www.soulsurfer.com/story.html, retrieved February 8, 2014.
8. *Spark: The Revolutionary New Science of Exercise and the Brain*, by J. Ratey (New York: Little, Brown & Company, 2008).
9. *Illusions: The Adventures of a Reluctant Messiah*, by R. Bach (New York: Dell Publishing, 1977).

chapter
6

Thinking and Choosing

Can I really control how I think? Stressful thoughts automatically pop into my mind. I'm looking for some simple strategies that can help me reduce stress by changing how I think.

My first thoughts always seem to be to see the negative side of things. Can I learn to be more optimistic about how I think about things?

Can I do anything to change how I respond to stressful events?

Jennifer Evans/Candy Apple Photography

> Mind is the Master power that molds and makes, And Man is Mind, and evermore he takes The tool of Thought, and shaping what he wills, Brings forth a thousand joys, a thousand ills: He thinks in secret, and it comes to pass: Environment is but his looking-glass.
>
> *—James allen*

Learning Objectives

Study of this chapter will enable you to do the following:

6.1 Experience and apply a variety of cognitive techniques to prevent unhealthy stress.

6.2 Distinguish between effective and ineffective ways of responding.

6.3 Respond to situations in the most effective way that will result in inner peace.

6.4 Explain how rational thinking differs from irrational thinking.

6.5 Identify specific types of thought patterns you engage in that have positive or negative effects on your handling of stress.

6.6 Evaluate how your thinking influences your emotions and stress.

Real People, Real Stories

A Wake-Up Call Motivational speaker and author Earl Nightingale relates this story:

Some years ago, a friend of mine played a trick on his wife that changed her life. Over the years, his wife, Karen, had formed the habit of shouting at the children, particularly in the morning. She screamed at them to get up and get dressed, to come to breakfast, to get ready for school, to catch the school bus. This was a scene that no doubt is duplicated in thousands, perhaps millions, of homes every morning.

But it left my friend John and the children with jangled nerves every morning, with a great desire to get as far from the house as possible in the shortest possible time. Each morning, John found himself heaving a sigh of relief as he left the wild confusion and noise of his home for the quiet drive to his office.

On one such drive, John began to think of ways in which this situation could be changed. It was absurd to think that every member of his family had to start each day with an unhappy scene of shouting and confusion. Suddenly he got an idea he thought might work.

The next morning, unbeknownst to Karen, John hid a tape recorder in the kitchen. Throughout the frenetic tableau of shouting and imprecations, the silent machine recorded every word. Then, after the children had left and Karen was sitting limply in her chair with a cup of coffee, catching her breath after her morning drillmaster duties, John played the tape for her.

For a few moments, Karen looked at him in curious amazement. Then she suddenly realized that the strident, shouting, barking, unhappy voice was her own. For the first time, she heard herself as she sounded each morning to her husband and children. Her face flamed in wounded embarrassment as the awful sound of her own voice again filled the kitchen. Long before the tape was over, she put her head in her arms and began to cry.

John turned off the tape recorder and put his arms around her. When she raised her tear-streaked face to look at him, it was filled with resolve. She said quietly, "John, I'll never make another sound like that as long as I live."

The next morning the children were dumbfounded but delighted. Their mother was smiling happily. She spoke to them in normal tones. After the children, still dazed by the smiling stranger who looked like their mother, had left for school, John and his wife sat and talked over a cup of coffee. She explained that she had been operating on autopilot and needed a wake-up call.

Source: "To See Ourselves," by Earl Nightingale, *Nightingale-Conant's Insight, 100* (Chicago: Nightingale-Conant Corp.).

6.1 Thinking and Choosing

Do you think your love life is a failure? How about your job? And what about your less-than-perfect body? You don't need a psychologist to tell you that what you think generates how you feel. In nearly all situations, the stress you feel begins with a thought. This is the bottom line of cognitive therapy. The way you think—your ideas, values, and perceptions—all affect your stress level. Your thoughts shape the events and circumstances of your life. Thoughts relieve stress and, likewise, can result in extraordinary life changes.

In the preceding chapter, you were introduced to concepts related to cognitive restructuring, including perception and control. In this chapter, you will learn a variety of cognitive techniques, from simple to challenging, that you can use to change how you view the events and situations in your life. You will learn simple methods such as thought-stopping and power language. You will also learn about conditioned-response, levels of responding, rational emotive behavior therapy, and the ABCDE technique. These cognitive approaches can help you reduce stress mentally by showing how your thoughts contribute to every stressful situation you experience, and offering specific ways you can change the ways you think about things.

6.2 Cognitive Distortions

What are some common ways of thinking that tend to give rise to stress in the first place? The term *cognitive distortion* was introduced in Chapter 5. Cognitive distortion occurs when thoughts are magnified out of proportion to their seriousness, resulting in excess stress. You might have the habit of magnifying negative thoughts. If you do, you are not alone. Many people who react strongly to mental stress find they have developed self-destructive thought patterns. Inspirational speaker Zig Ziglar calls this "Stinkin' Thinkin'"—which is quite descriptive. Negative thinking can turn everyday events into outbreaks of anxiety. See if any of these relate to you.

FYI

Believing What You Are Told

In a study that observed parent-child interactions over several days, researchers found that, on average, there were 400 negative comments for every positive one spoken to each child. The researchers concluded that negative thinking might be a learned response that can be carried into adulthood.

Source: Self-Esteem and Peak Performance, *by J. Canfield (Nyack, NY: Vantage Communications, 1988).*

- *All-or-nothing thinking.* You either did the work perfectly, or you totally messed up. Everything is seen as an extreme (good or bad); there is no middle ground. *Example:* "I can't believe I blew that test. I'm a terrible student."
- *Personalizing.* This is the tendency to assume responsibility for things that are out of your control. Personalizing can lead to feelings of needless guilt. You always ask yourself, "What did I do wrong?" The answer might be *nothing*. *Example*: "Brad walked right by my desk this morning without saying hello. I must have made him mad."
- *Discounting the positive.* Are you the type of person who cannot accept a compliment? Many people feel they are undeserving of praise. *Example*: You played a great ballgame or performed well in an artistic endeavor. Afterward, someone compliments you on your performance. Rather than saying, "Thank you," you respond, "I was just lucky" or "It was nothing."
- *Assuming the worst.* Some people think they know what others are thinking or how things will turn out—and it's never good. This is also called **pessimism** or **awfulizing**. The awfulizer predicts disaster and lives as if it is inevitable. Awfulizers spend much of their life feeling upset. *Example:* "I think that guy is staring at me. He must think I look weird." This thought is quickly followed by, "I'm the ugliest person I know."

Distorted thinking often leads to feelings that are associated with stress. Learning to think in new ways is an outcome of cognitive therapy. **Cognitive therapy** is intended to focus on cognitive distortions and relearn thought processes to alter negative emotions and raise self-esteem. Here is what one student reported after participating in cognitive therapy to help her deal with stress: "I've been doing outstanding. Not every day is good. But now I know that if one thing goes wrong, I don't have to have a bad day; I can have a bad moment." Cognitive therapy can be a remedy for both distorted thinking and more severe disorders such as depression.

iStock.com/Mark Bowden

Negative thinking can be a learned response resulting from negative comments children hear every day.

6.3 Thinking Errors

Psychologist Albert Ellis identified 12 irrational ideas, like distorted thinking, that he calls thinking errors. These ideas, frequently found in our culture, are inaccurate and irrational, and they contribute to some of the stress-related problems you learned about in Chapter 4. The beliefs and conditioned responses often take the form of absolute statements. Instead of responding with a preference or a desire, we make unqualified demands on others or convince ourselves that we have overwhelming needs.

Ellis also presents disputing ideas that successfully counter the irrational ones. These innovative ideas allow us to move forward with confidence and without unreasonable stress and anxiety.

We all practice irrational thinking. Reflect carefully on Ellis' 12 irrational beliefs, and decide which three relate the most to your way of thinking. Think of personal examples that show this thinking. Consider the related rational disputing idea and how you could replace your irrational thoughts with this new way of thinking.

Making a conscious effort to change or reframe the way you think, and to stay focused on the positive thought, is an essential element in stress management. Eliminating "Stinkin' Thinkin" involves first awareness, and then correction, of these mistaken thoughts. Implementing these cognitive techniques can help get you started.

6.4 Cognitive Techniques That Help Overcome Distorted Thinking

Some helpful cognitive techniques include positive self-talk, thought-stopping, power language, and going with the flow.

Positive Self-Talk

Self-talk describes the messages you send to yourself, your internal dialogue to yourself about yourself. This flow of thoughts, sometimes called **stream of consciousness,** often includes how you

STRESS STUDIES

Cognitive Therapy for PTSD

There is evidence that cognitive behavior therapy (CBT) can be useful in phobias and obsessive-compulsive disorder. This study shows that intensive CBT may also be helpful for posttraumatic stress disorder (PTSD). A feasibility study tested the acceptability and efficacy of an intensive version of cognitive therapy for PTSD (CT-PTSD). RESULTS: Intensive CT-PTSD was well tolerated, and 85.7% of patients no longer had PTSD at the end of treatment. Patients treated with intensive CT-PTSD achieved overall outcomes similar to a comparable group of patients treated with weekly CT-PTSD in an earlier study. However, the intensive treatment improved PTSD symptoms over a shorter period and led to more significant reductions in depression.

Source: *"Intensive Cognitive Therapy for PTSD: A Feasibility Study," by A. Ehlers, D. M. Clark, A. Hackmann, N. Grey, S. Liness, J. Wild, J. Manley, L. Waddington, & F. McManus,* Behavioural and Cognitive Psychotherapy, 38(4) *(2010): 383–398.*

12 Irrational Ideas That Create and Add to Stress

1. *Irrational idea:* I must be loved by everyone, and everyone must approve of everything I do.

   Rational disputing idea: I can't possibly please everyone. I will be faithful to my values, as I strive to be loving, creative, and productive. Others may like me, or they may not, but I choose not to be anxious about their opinions of me.
2. *Irrational idea:* Certain acts are awful or wicked, and people who perform such actions should be severely punished.

   Rational disputing idea: People's poor behaviors do not make them rotten individuals. There are things that others do that I wouldn't. But they are not bad people. Blaming and punishing does little if any good and often can be harmful. People usually do what they feel is the best thing to do in most situations. This applies both to me and everyone else. I can allow for that.
3. *Irrational idea:* It is horrible when things are not the way I like them to be.

   Rational disputing idea: Many different things happen in the world. It is not possible for all of them to be to everyone's liking. I can accept that the things that take place might never be exactly the way I would like them to be. That's just how life is.
4. *Irrational idea:* Human misery and unhappiness are always externally caused and are forced on me by outside people and events.

   Rational disputing idea: Most if not all unhappiness I experience is not caused by the unpleasant aspects of the events of life, but is created internally by the things I say to myself about those events. I may be able to control parts of external circumstances, but I can control all my internal responses to those events. That part is mine to choose.
5. *Irrational idea:* If something is or may be dangerous or fearsome, I should be terribly upset and endlessly obsess about it.

   Rational disputing idea: I cannot control or prevent events from happening in the world. Worrying about them will not positively affect them in any way. Strangely, most things I worry about don't happen anyway. If an unpleasant event does happen, I'll approach it realistically, deal with it appropriately, and move on.
6. *Irrational idea:* It is easier to avoid difficulties and responsibilities in life than to face them.

   Rational disputing idea: I can face my problems squarely and solve them to the best of my ability. An enjoyable life is not one without problems; it is one where I meet challenges and successfully overcome them.
7. *Irrational idea:* I absolutely need something or someone stronger or greater than me, on whom I must rely, to succeed.

(*continued*)

> When one door closes, another door opens: but we often look so long and so regretfully upon the closed door.
>
> —*Alexander Graham Bell*

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

Rational disputing idea: I easily take appropriate risks and trust that my skills and abilities will rise to the surface to help me succeed. I enjoy other people in my life, but I have no complete need for anyone.

8. *Irrational idea:* I should be thoroughly competent, intelligent, and achieving in all possible respects.

   Rational disputing idea: I don't need to be perfect in everything. In fact, it is impossible to be truly perfect at anything, because there's always room for improvement. I will strive for achievement and accomplishment. I will make mistakes, and that's okay. I will learn from them and move on.

9. *Irrational idea:* Because something once strongly affected my life in the past, it must determine my present and future behavior; the influence of the past cannot be overcome.

   Rational disputing idea: I can certainly learn from my past experiences, but I don't need to be overly attached to or prejudiced by them. The past does not equal the future. I am not the same person I was before. I am constantly changing. I can choose to see things in a different light.

10. *Irrational idea:* I must have absolute and perfect control over things.

    Rational disputing idea: The world is full of probability and chance, and I can still enjoy life despite this. Because I can't control most of what happens around me, I might as well flow with it instead. I choose to let go and flow.

11. *Irrational idea:* Human happiness can be achieved by inertia and inaction.

    Rational disputing idea: I am happiest when I am venturing out of my comfort zones to practice creative pursuits and devote myself to people or projects outside of myself.

12. *Irrational idea:* I have virtually no control over my emotions; I am their victim and cannot do anything about how I feel when things happen.

    Rational disputing idea: I do have control over my emotions. I am responsible for how I feel, and I always choose the feeling that I experience based on my own thoughts about what is happening.

Source: "The Essence of Rational Emotive Behavior Therapy (REBT): A Comprehensive Approach to Treatment," by Albert Ellis; Albert Ellis Institute | REBT Workshops | CBT Workshops. Retrieved April 16, 2011, from http://www.rebt.org.

STRESS BUSTING BEHAVIOR

Think Right!

Follow these tips to change your mindset and reduce your level of stress. Consider all that you already follow, or that you are committed to trying.

○ Accept shades of gray. Just because something is not perfect doesn't mean that it's terrible.

○ Don't take it personally. Sometimes things go wrong. Sometimes people don't like you. That's normal, and it doesn't mean that there's anything wrong with you.

○ Accentuate the positive. Play up the good aspects of your life and your achievements; downplay the negative aspects and the mistakes.

○ Accept compliments. Don't deny that you deserve the praise; just say "Thank you!"

○ Assume the best. Think positively about your current situation and your future.

○ See the best in other people. Assume that they have good reasons for what they do, even if you think they are misguided. Give people the benefit of the doubt.

○ Refuse to worry. Do your best to achieve a positive outcome, but then be ready to accept whatever life has in store for you. Whatever will be, will be, and worrying doesn't help!

○ Believe in your ability to control your emotions. You get to choose how you feel in response to what happens in your life.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

interpret events in your life. Becoming aware of this stream of consciousness and listening to what you are thinking is the first step in mastering your self-talk. Many of us don't even realize how often our self-talk is negative. Our brain thinks faster than we can talk, so if we are in the habit of thinking negatively, these thoughts enter the mind so quickly that we may not even be aware of them.

Most of the things we think about are the result of habit. Because we are used to thinking about things in specific ways, changing this pattern may be challenging. You can learn to manage your self-talk by becoming more aware of the things you say to yourself. Do you tend to put yourself down?

- "I'm too fat. No one thinks I'm cute."
- "I'm late again. I can't get anywhere on time."
- "If I weren't such an awful parent, Jeff wouldn't have turned to alcohol."
- "I'm too stupid. I'll never pass this math course."

Negative self-talk is mostly habitual. With frequent repetition of any negative judgment about ourselves, we begin to believe it. Once you become aware of your self-talk, shift your negative thoughts to positive thoughts. Try talking to yourself like you would talk to a friend you care about.

- "I have a lot to offer in a relationship."
- "I'm a smart and capable person. Tomorrow I'll leave early enough to get to work on time."
- "Even though Jeff has made some poor choices, I've always been a loving parent."
- "I'll have to work hard, but I've successfully passed other tough classes, and I can pass this class, too."
- "I love challenges and opportunities."
- "I make time for family and friends."
- "I give my best effort, and that is good enough."
- "Exercise is a time for me to get stronger and reflect on life."

Here is an example to show the impact self-talk can have on stress. See if you can relate to Amare's experience.

Amare has just received his final grade in chemistry, and he is furious. He was only 1 point away from obtaining a B, and a C has now blown his GPA. Amare can hardly believe that his unyielding teacher will not cut him some slack and give him 1 point to raise his grade. He is also mad at himself. "I'm so stupid. I slept in one day and missed a quiz that ended up ruining my grade." Amare is stressed and angry.

Amare could choose to think about this situation in a more positive way to reduce his stress. His grade will remain the same either way, but the way he feels will be different. "I'm disappointed that I earned a C in chemistry, but that's what I got. I learned a lot about the importance of attending every class and turning in all my assignments. I won't make the same mistake of missing class, especially when my grades are this important. I'll raise my GPA next semester, and I know I can do it."

STRESS STUDIES

Silver or Bronze?

Three research psychologists published an article showing that what you think affects how you feel. They observed Olympic silver and bronze medal winners as they stood on the podium receiving their medals, and they rated them according to how happy they appeared to be. Who do you think looked happier: the silver or the bronze winners?

The findings may surprise you. The bronze winners, even though they had performed worse than the silvers, appeared happier. The researchers found that the silver–medal winners tended to compare themselves up to the gold-medal winners, thinking, "If only I'd been a second faster, I'd be the best in the world. Now, I'm a loser." The bronze medalists, on the other hand, tended to compare themselves to all the rest of the competitors. They were thrilled to be on the podium when they could easily have been just another competitor.

How you feel depends upon what you say to yourself, especially when comparing yourself to others. So next time you're stressed about how little money you have, or how your car is about to fall apart, think bronze and be thankful for what you have. According to the research, it's good psychology.*

Issei Kato/Reuters

Olympic bronze-medal winners appear happier than silver medal winners. Researchers found that silver medalists felt like losers because they tended to compare themselves to the gold-medal winners. Bronze medalists were thrilled to be on the podium, realizing they could have been one of the many competitors not to medal. How you think about an experience dramatically affects the resulting feelings.

Source: *"Are Smiles a Sign of Happiness? Gold Medal Winners at the Olympic Games," by F. Dols, J. Ruiz-Belda, & M. Angeles,* Journal of Personality and Social Psychology, *69(6) (1995): 1113, 7.*

**"Winning a Bronze Medal May Be Better in the Race for Happiness," by S. Brody,* Los Angeles Times, *2004.*

Positive self-talk can improve self-esteem and eliminate the chronic, nagging stress that destroys people from the inside out. Remember, your thoughts generate your feelings. Thinking negative thoughts about yourself affects your self-esteem. The results are

TIME TIP

"One of the best things that I have learned to do that has made such a tremendous difference for me is simply stopping and asking myself this very cool question: 'What is the most valuable use of my time right now?' All too often, I find myself just spending time doing useless things like watching television or worrying about all the things that I have to do. But when I ask that question, a good answer usually comes to my mind that lets me know what I need to be doing right now."

—Cheryl C.

negative, stress-producing emotions such as guilt, anger, anxiety, and fear. Conversely, thinking positively about these learning experiences affects your self-esteem similarly, but in a positive way. As a result, your stress-reducing emotions are positive, including happiness, peace of mind, confidence, and self-control. Mental health professionals promote the conscious use of positive self-talk as a powerful force for changing the way individuals think, feel, and act.

Recall a recent experience when you felt angry or frustrated. Describe your self-talk during that experience. Now rethink the whole situation using positive self-talk. Notice how differently you feel.

Thought-Stopping

Thought-stopping is just what it sounds like—stopping negative thoughts when they enter your stream of consciousness. When an unconstructive thought creeps into your mind, you can recognize your choice and say, "Stop!" In doing so, you replace the stress-producing, negative statement with a positive statement. The key to success is to believe the positive affirmation. Although this may take some practice, you *can* change the way you think.

Suppose you start to think, "I'll never be able to learn how to use this computer. I'm too old." But instead, you can say, "Stop!" and replace the negative, stress-producing thought with, "I've learned difficult things before. I can do this." This simple technique works in part because it increases awareness. Consciously analyzing the thoughts that pass through your mind brings greater awareness to the messages those thoughts hold. Thought-stopping also brings an immediate end to negative messages and the resulting emotions that follow faulty thinking.

Because what we say is a result of what we think, you also can apply this technique to the spoken word. Ask friends and family to help by saying, "Stop your negative self-talk" when they hear you putting yourself down. Before long, you will be highly aware of negative self-talking.

The outcome of positive self-talk and thought-stopping is **learned optimism.** As psychologist Martin Seligman explains, "We have a choice about how we think. Optimism is a learned set of skills. Once learned, these skills persist because they feel so good to use." Seligman suggests that by challenging the automatic negative thoughts that enter our brains, and by asserting statements of our self-worth, we can transform ourselves into **optimists** who see what is right, rather than **pessimists** who forever focus on what is wrong.[1]

Power Language

Power language is a way of speaking that helps you boost your feeling of control by merely changing the words you use. Words can create feelings of powerlessness or feelings of control. Compare these two statements:

> "I can't handle this deadline."
> "I won't handle this deadline."

"I won't" is a choice you make—an act of will—resulting in the feeling of control rather than helplessness. You are no longer the helpless victim of the events, situations, and circumstances around you.

When we change our automatic self-talk—the things we say to ourselves about ourselves—we change how we feel, how we perform, and how we live. Look at Table 6.1 and notice how it feels when we fine-tune our self-talk. Small "upgrades" can have powerful results. You have the power to change how you feel by changing the words you use.

Going with the Flow

Going with the flow—accepting situations we cannot control—is a cognitive technique that we sometimes overlook. We tend to overlook acceptance because it seems so difficult.

TABLE 6.1 Upgrading Negative Self-Talk into Positive Self-Talk

Threat	upgrades to	*Challenge*
Expectation	upgrades to	*Preference*
Angry	upgrades to	*Forgiveness*
Fear	upgrades to	*Curiosity*
Hurt	upgrades to	*Bothered*
Guilt	upgrades to	*Self-acceptance*
Jealousy	upgrades to	*Allowing*
Overwhelmed	upgrades to	*Many opportunities*
Complaining	upgrades to	*Gratitude*
Stressed	upgrades to	*Energized*

Psychologist Robert Eliot says, "If you can't fight it or flee it . . . flow with it," an idea which is expressed eloquently in the *Serenity Prayer*, widely credited to St. Francis of Assisi:

> God grant me the serenity to accept the things I cannot change,
> the courage to change the things I can,
> and the wisdom to know the difference.

Consider the comparison of the bamboo plant and the grass reed. When it is fully grown, the bamboo plant stands tall and stiff. The grass reed similarly grows tall but has more flexibility in its shaft. When the fierce winds come, the bamboo tries its best to continue standing tall and strong, resisting the force of the wind. But the power of the wind snaps the long shaft from the lower parts of the plant. The reeds meet the same stiff wind. They bend and flow as the wind pushes them around violently. In the end, after the winds have calmed, the reeds have survived. They flowed with the circumstances they could not control and turned out better off than the bamboo. The resistance of the bamboo plant is the cause of its demise.

6.5 Underlying Theories and Practices

Becoming increasingly aware of how you think, and then implementing techniques to replace stress-producing thought patterns, can have a significant impact on how you feel. Positive self-talk, thought-stopping, power language, and going with the flow are tools to develop a stress-relieving thinking pattern. Now that you have some tools for improving your thinking, let's look in more detail at some underlying theories and therapies that help explain stressful thinking. Conditioned-response, levels of responding, rational emotive behavior therapy, and the ABCDE technique are helpful tools to prevent stressful thinking.

Conditioned-Response

One theory that describes why people make the choices they do has at its core the well-known concepts of stimulus-response and conditioning. This **conditioned-response theory** proposes that when things happen in our environment, we are conditioned to respond in specific ways.

In the 1890s, Russian physiologist Ivan Pavlov conducted a series of experiments dealing with salivation responses in dogs. He

WHAT ELSE CAN I DO?

Turn Needs into Preferences

Our basic physical needs are air, food, water, and supporting a proper body temperature. All the other things in life are things we want but don't necessarily have to have. Downgrade your needs to preferences, and release your attachment to things you think you need but in reality merely want. Instead of saying, "I need," say, "I want." Say "I choose to" instead of "I have to." Notice how differently you feel when you speak to yourself this way.

STRESS STUDIES

Going with the Flow

For his master's thesis at California State University–Long Beach, Ryan Pittsinger, a lifetime surfer, surveyed 107 surfers after a 30-minute session in the waves and found that positivity and tranquility increased significantly, while negative mood and fatigue decreased. Pittsinger used his findings in his work with an "ocean therapy" program to help at-risk youth. The program combines surf instruction with discussions to help participants apply the principles of surfing—like confidence and trust—to their everyday lives. "You have no control over the conditions," Pittsinger says, "so you're forced to deal with what you get."

Source: *"Catch Some Waves," by M. Kim,* U.S. News & World Report, *December 2010, 147(11) p. 63.*

EpicStockMedia/Shutterstock.com

Ride the waves. Just as in surfing, sometimes going with the flow and accepting what we cannot change results in the smoothest ride.

would introduce a stimulus of food to a dog, and at once the dog would begin to salivate. This is a natural response: Salivation helps the dog digest food.

Pavlov then introduced a sound (he used various sounds such as whistles and tuning forks) simultaneously when he presented the food. With the introduction of that paired stimulus—the food and the sound—the dog still responded with salivation. Finally, Pavlov introduced the sound but without the presence of the food. He found that the dog was conditioned to salivate to the sound because it associated the sound with the food. When the food was not present, the dog still salivated. This and other similar studies became the basis for our understanding of why people sometimes react the way they do.

Most experts agree that people are conditioned to a considerable extent. We respond to stimuli in our environment in learned ways that are almost automatic. For example, we tend to eat at certain times of the day. In the United States, we drive our cars on the right side of the road rather than the left. Most of us sleep during the night and are awake during the day. When the phone rings, we pick it up expecting to talk with someone. These are all learned behaviors, and many of them serve us well—for example, driving on the same side of the road. Having to relearn the mechanics of driving a car every time we want to go somewhere would be tedious and inconvenient. Not having to think about many of the things we do is helpful.

Some patterns of behavior (conditioned responses) that we perform automatically do not serve us quite so well. For example, if someone yells obscenities at us, we get angry, offended, and defensive. When we drive behind someone who quickly cuts in front of us, we get frustrated or upset at that person. When we sit in a class or a meeting, and the speaker goes on and on in a monotonous tone, we tend to get impatient or bored. These are conditioned or learned responses. We do not inherit these tendencies. We do not have angry, bored, or easily offended genes. We are not programmed from birth to automatically respond in that way.

In the chapter opening story about Karen and John, Karen's surprise when she heard herself on the tape recorder indicates that she had become conditioned to react to the morning demands predictably, without much thought or awareness on her part. She reacted by continually yelling. The result was stress and pressure on Karen and her family.

This conditioned response can be likened to an elephant trained for the circus. The trainer puts a huge clamp around one of the elephant's legs as soon as it can walk. Attached to this clamp is a chain. At the other end of the chain is a pole to which the chain is attached. The trainer trains the elephant to walk in circles around this pole. After several weeks of this training (conditioning), the elephant comes to believe that whenever it has a clamp around its leg, it can go only so far away from the pole. You could tie a flimsy string from the clamp to the pole, and this mighty elephant would remain within the circle. It has been conditioned to accept its limitations.

In much the same way, we tend to grow attached to our beliefs. As a result, we limit ourselves to our self-made borders. These ways of responding are learned behaviors. This is both good news and bad news. The bad news is that we did it to ourselves. For example, when we are offended by someone else's words or behavior, the truth is that the other person does not have the power to offend us. Instead, we make a choice to be offended. Our thoughts about what the person says or does are what make us feel offended. We decide how we interpret what happens and the feelings we get from our interpretations.

The good news is that if we learn to respond in a certain way to something that happens, we can unlearn it. We can remove that way of responding from our thoughts and behaviors. We are not stuck to any pattern of conditioned responses. We can retrain ourselves to respond in ways that are more productive and less stressful.

Choice

As conscious and aware human beings, we can place something between the stimulus and the response, which will immediately put us in control of how that situation will affect us. That essential element is *choice*. In any situation, we have the power to choose our response to what is happening. We don't have to react automatically with anger toward the person who yells at us. We have a choice in the matter, and we can choose a different reaction. We can choose to return this person's anger with our anger, or choose to remain calm and turn and walk away. Just because the driver in front of us quickly swerves doesn't mean we have to respond with irritation. We can choose to ignore the driver. Or we can choose to respond with kindness. Or we can choose to smile and wave. It really is our choice. As Master Yoda, the *Star Wars* character, appropriately said, "You must unlearn what you have learned."

Choosing to respond in a way that is different from how we are conditioned can be challenging; it requires deliberate intent. But it can be done. One of the most profound examples of being responsible (response-able) is that of Victor Frankl, a prisoner of war in the Nazi concentration camps of World War II. In his book *Man's Search for Meaning*, he tells how he came to realize that, regardless of what his Nazi captors did to him, he had total and complete choice of how he could respond. As horrendous as the conditions were in this prisoner of war camp, Frankl realized the following conclusion:

> The experiences of camp life show that man does have a choice of action. There were enough examples—often of a heroic nature—which proved that apathy could be overcome, irritability suppressed. Man can preserve a vestige of spiritual freedom—of independence of mind—even in such terrible conditions of psychic and physical stress. We, who lived in concentration camps, can remember the men who walked through the huts comforting others, giving away their last piece of bread. *They may have been few in number, but they offer sufficient proof that everything can be taken from a man but one thing. The one thing that can never be taken away is the last of the human freedoms—to choose one's attitude in any given set of circumstances, to choose one's own way.*[2]

WHAT ELSE CAN I DO?

Make more mistakes! In reality, there are no such things as failures, only outcomes. You decide whether you failed at something. When you have done something you feel was a mistake, learn from it. There is no point in getting upset over it. Time has passed, and you can't undo what happened. The only valuable thing that you can do with that which has passed is to learn the lesson the experience gives to you, make amends where appropriate, and choose differently next time.

Frankl's message is that whenever we feel upset, angry, bored, nervous, anxious, embarrassed, shy, or any other emotion, these feelings happen because of our thoughts about the events, rather than the events themselves. Instead of blaming the teacher for the bored feelings you have during class, or pinning your rage on that driver who cuts in front of you, recognize that you have a choice in how to react.

No one can make you feel inferior without your consent.

—Eleanor Roosevelt

James Allen made the following statement more than 100 years ago, and it still rings true:

> Man is made or unmade by himself; in the armory of thought, he forges the weapons by which he destroys himself. He also fashions the tools with which he builds for himself heavenly mansions of joy and strength and peace. By the right choice and true application of thought, man ascends to the Divine Perfection; by the abuse and wrong application of thought, he descends below the level of the beast. Between these two extremes are all the grades of character and man is their maker and master.[3]

Levels of Responding

Things happen in our environment over which we have absolutely no control. We can do nothing to affect their development or outcome. Typical examples or circumstances are natural occurrences, other people's actions, and world events that we view on television. When we notice these uncontrollable events, we tend to react before we think about how we could respond. We are on autopilot.

For example, a person is eating lunch at a restaurant. The server brings him some food and a drink. As the server hands the man his drink, it spills on his lap. This is an event that happened, and he can do nothing to un-spill the drink. His tendency may be to become angry. But he could react differently, and, as we will soon see, how he responds will affect his emotional state and his stress level.

Even though individuals respond to events in a variety of ways, we can categorize how people respond to uncontrollable events in two broad categories:

1. Effective responding
2. Ineffective responding

These responses are designated as effective or ineffective based on whether they result in feelings associated with relaxation, such as joy, peace of mind, balance, growth, and happiness, or whether they result in stressful emotions such as anger, fear, frustration, imbalance, boredom, and chaos.

TABLE 6.2 Levels of Responding

Usefulness	Degree of Inner Peace	Ways We Respond to Events	Sounds Like (What We Say to Ourselves)	How We Feel—What We Get: Our Resulting Emotional State
Effective		Gratitude	I appreciate . . .	Joy, serenity, contentment
Leads to feelings associated with relaxation	More Peace	Allowance/Acceptance	It's okay . . . I embrace . . . I can live with this . . . I can go with the flow	Peace, release, relaxation, freedom
		Discovery	I wonder . . . What would happen if . . .? What can I learn from this?	Inquisitiveness, curiosity, growth
		Observation	I am noticing . . .	Calm
Ineffective Leads to feelings associated with stress		Resistance/Complaining	I wish things were different	Boredom, fatigue, anger
	Less Peace	Judgment/Criticism/Blaming	This is really a /He is really a (insert a negative noun) . . .	Guilt, shame, low self-worth, false pride
		Attachment/Rightness	This *must* be a certain way . . .	
			Use words like *must, have to, need to, should*	Mistrust, anxiety, anger, disappointment

Within those two categories, seven subcategories of **levels of responding** help clarify the best ways to respond: gratitude, allowance/acceptance, discovery, observation, resistance, judgment, and attachment. Table 6.2 shows the ways we typically respond to situations we can't control and the results we get when we respond in those ways.

Let's explore each way of responding beginning with the least effective and moving to the most effective response. To help clarify the differences in the levels of responding, we will relate each category to a situation in which a person, Jenny, finds herself but doesn't have much control in changing. She is waiting in a long line to buy tickets to an upcoming concert. The line is outdoors, and it is beginning to rain. She has been in the line quite a while, and the line is moving slowly. Jenny also has a class in 30 minutes, for which she will be late if the line doesn't move any faster. To get the tickets, she must be the one who pays for them when it comes to her turn, but that will not be happening soon. Jenny simply must wait in line. Let's consider how her possible responses to the situation will affect how she feels about what is happening. We will begin with the ineffective levels of responding.

Attachment/Rightness Attachment/rightness occurs when we cling emotionally to ideas, concepts, or situations. When we become emotionally attached to beliefs and circumstances, we think that we know what is best and hold on emotionally to that view. We carry the attitude that we are *right* and that *we* know what is best for us or someone else. When we attach ourselves to opinions, to ideas, and to how we think things "should" or "ought to be," we find ourselves in arguments. We mistrust people who do not believe as we do. We are disappointed when our expectations aren't met. People who respond with attachment tend to become quickly anxious, angry, and fearful. Their need to be *right* supersedes their desire to be happy. When things aren't as they *ought to be,* they get angry and tense. They believe being wrong means a loss of self-esteem.

In our scenario, Jenny feels that the line to buy tickets should be moving faster. She processes in her mind thoughts that might sound like this: "If these people knew what they were doing, they would have made several lines—and done it inside where it isn't raining!" Jenny feels things should be different than they are. As a result of this way of thinking, Jenny will generate feelings associated with stress.

Judgment/Criticism/Blaming Judgment, criticism, and blaming describe the mental act of putting a label on something and then trying to make that label the reality. People who react in this way tend to judge, criticize, and blame things, people, circumstances, and situations. For example, blaming the server who spilled the drink at the restaurant as "sloppy" or "clumsy" would be an ineffective way of responding for several reasons.

First, we have no conceivable way of accurately judging a situation or a person based on limited experiences. Consider how many life experiences every one of us has had from the first moment of consciousness to the present moment. Each of those life experiences has had some impact on our current behaviors and decisions. It isn't possible to capture the essence of every one of those life experiences and confine them into a moment of correct judgment or criticism.

Second, when we judge, we mostly have closed off other ways of seeing that person or situation. When we label someone we know who is careful with money as a "tightwad," we limit our ability to see him as economical or frugal.

Third, the act of judging is a mental process in which we try to elevate our worth to a higher level than the person we judge. When we call a thrifty person "penny pincher," we are saying to ourselves that we are better than she is because of her obvious flaw that must be pointed out.

Our judgments of others may reflect our feelings of self-inadequacy. In reality, no one has more worth than anyone else. People who have the highest self-esteem tend to be complimentary of others. They do everything possible to try to build up other people because they realize, unconsciously, that they do not need to inflate their self-esteem artificially by putting someone else down. Responding judgmentally or critically to situations results in feelings of guilt, shame, low self-worth, and false pride.

wavebreakmedia/Shutterstock.com

Resistance means wishing things were different than they are.

If Jenny responds with judgment, criticism, or blaming, she might say things about the situation that sound something like, "Those idiots! They don't have the slightest idea what they're doing." As you can imagine, calling the ticket sellers names is ineffective in improving the situation and will serve only to escalate Jenny's stress.

Resistance/Complaining Resistance is the mental process of wishing things were different than they are. The problem is that most of the time, situations, events, and circumstances cannot be different than they are. Most things are entirely out of our control and happen as they do. But resistance says that we wish things were otherwise. Resistance shows up when you say to yourself, "I'm in this situation, but I wish I were somewhere else right now." But here *is* where you are, and this *is* what is happening. Wishing otherwise simply increases stress levels. We can notice if we are resisting what is happening in several ways.

One obvious resistance factor is *anger.* When we are angry, we are saying that something is not happening according to our expectations. We will treat the subject of anger more thoroughly in Chapter 8.

Another way to determine resistance is if we are bored or tired. *Boredom* is the emotion that results from thoughts of, "I wish this were happening differently." As an example, when we are bored while listening to someone, we resist what the says or how he says it. We wish that he would speak differently or do something else.

Another way that we can tell when we are resisting something is by noticing how rapidly or slowly *time* seems to be moving. Have you ever spent a few short minutes talking with

CULTURE CONNECTION A Taoist Perspective on Resisting

Chuang Tzu, one of the great Taoist writers, told this delightful story of what sometimes happens to a person who wishes things were different than they are.

***

There was a man who was so disturbed by the sight of his own shadow and so displeased with his own footsteps that he determined to get rid of both. The method he hit upon was to run away from them. So he got up and ran. But every time he put his foot down, there was another step, while his shadow kept up with him without the slightest difficulty. He attributed his failure to the fact that he was not running fast enough. So he ran faster and faster, without stopping, until he finally dropped dead. He failed to realize that if he merely stepped into the shade, his shadow would vanish, and if he sat down and stayed still, there would be no more footsteps.

Source: *The Way of Chuang Tzu,* by T. Merton (New York: New Directions Publishing Corp., 1965), p. 155.

another person and it seemed like the conversation would never end? Conversely, have you ever spent time talking with someone and before you knew it, several hours had passed? In the first instance, you were resisting the experience. You didn't want what was happening to be happening. In the second instance, you allowed what was happening to happen.

If Jenny responds to the slow ticket line with resistance—if she says to herself that this line should be moving faster than it is (which isn't reality)—time will seem to drag by. Her feelings of anger and stress will increase as a result.

Now, let's see how Jenny might choose to respond more effectively.

Observation Instead of these negative ways of responding, positive responses—responses that correspond to ways of thinking above the bold line in Table 6.2—are useful because they automatically lead to positive feelings of relaxation, well-being, calm, and inner peace. We are not always trained to respond in these ways, and we may lack role models who show this type of responding. Many people are taught, from an early age, to exchange blow for blow, to give others "what they deserve," to react negatively. Responding above the line involves a shift in awareness toward a conscious focus on choice rather than reacting by habit and conditioning.

The first positive response, observation, is the simple act of noticing something without adding anything emotionally. Our senses bring us data from the outside world, and we just remain aware. We might respond by saying something like, "Hmm . . ." or "I'm noticing or observing . . . (whatever my senses bring into my awareness)." We take in the information that presents itself. We don't add anything. This is how we function when we are mindful, as you will learn in Chapter 7. Initially, this may sound strange or ineffective. What is the value in spending our moments remarking on what we are noticing?

> To acquire knowledge, one must study; but to acquire wisdom, one must observe.
>
> —*Marilyn vos Savant*

In our example, if Jenny responds by observing, her thinking sounds something like this, "Hmm . . . I'm noticing that this line isn't moving very fast and I might not arrive at my class on time." She adds no emotion; she merely observes *what is*. With this attitude, Jenny stays calm. The value of responding by simply observing has tremendous power in keeping us free of stress.

Discovery Discovery is based on observation and adds the additional component of learning, of seeking to understand—of discovery. When we respond in this way, we become like the artist, the poet, or the scientist. We observe what is happening, and we seek to find out what we can learn from it. We focus on how this can add to the enjoyment or quality of our experience of the present moment, rather than hinder or act as an obstacle. At this level of responding, we live in the questioning mode.

Taking this approach, Jenny would keep an attitude of playful discovery that might sound like this: "I wonder what cool things I can notice about the other people who are in this line." "How many boys are in this line compared to girls?" "How many are blond, brunette, redheaded, or bald?" "What can I learn about this experience so next time I'm not waiting in a line making myself late for class?" "If I look up at the clouds, perhaps I can tell how long this rain will last." Imagine how much better standing in this line will be for Jenny if her thoughts are in the discovery mode of responding. This way of thinking will not generate stressful thoughts and emotions.

WHAT ELSE CAN I DO?

Count Your Blessings

Start a gratitude journal. At least three times weekly, make a list of things for which you are grateful. Robert Emmons, Ph.D., psychology professor and author of *Thanks! How the New Science of Gratitude Can Make You Happier,* encourages people to focus on "simple everyday pleasures, people in your life, personal strengths or talents, moments of natural beauty or gestures of kindness from others." Based on his research, Emmons has made some fascinating discoveries, most notably that people who keep gratitude journals are 25% happier than those who do not. If you look at the bright side of things and see all that is wonderful in your life, you won't be so tempted to concentrate on failure, disappointments, and unmet expectations.

Source: *"Living Thanksgiving: Science Shows Gratitude Can Have Wide-Ranging Health Benefits," by E. Schneider,* Energy Times, *November/December, 2008.*

Allowance/Acceptance Allowance and acceptance occur when we emotionally embrace what is happening as the way things are, and we are okay with them. We say "Yes" to *what is*. Acceptance says we allow and even embrace what is happening. Acceptance is realizing that what is happening is how it is, and it isn't any other way—and that is okay.

In this mode, as Jenny stands in line, she notices the speed at which it moves and accepts that this is how concert ticket lines sometimes move. In so doing, she keeps her composure and her ability to think rationally. When we respond to events and circumstances with acceptance, we experience the positive emotion of peacefulness, naturally.

Consider the metaphor of a cork drifting down a stream. It moves along smoothly as the current takes it gently down to some endpoint.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

STRESS STORIES

Responding to Garbage

One day, I was riding my road bike on a highway. After a pleasant ride of about 25 miles, I looked back to see a truck approaching very close to where I was cycling. As it got even closer, I sensed that it was slowing slightly. As the truck came beside me, I felt something hit my shoulder. The young boys in the truck had thrown their bag of fast-food garbage at me. I was startled, but the bag didn't hurt me at all. As I continued riding, I watched the boys in the truck laughing and speeding ahead as fast as their old truck could go.

Now was my chance to respond. At this point, I could do absolutely nothing to affect these kids. Even on my best days, I couldn't catch their speedy truck. I was left to myself to respond in whatever way I chose. Let's consider each of the modes of responding to see how my thinking would affect my emotional state.

- *Attachment.* Young kids like those shouldn't be allowed to drive on this stretch of road. There should be a law against kids driving so close to bikers. *(anger, mistrust, stress)*
- *Judgment.* Those idiotic, worthless kids are so rotten and stupid! *(false pride, stress)*
- *Resistance/Complaining.* I wish those kids weren't driving on this road. It's too narrow. Why did they choose to ride here today and throw their garbage at me? *(frustration, anger, resentment, stress)*
- *Observance.* Hmm . . . I noticed those boys threw something out of the truck, and it happened to hit me. I noticed they kept right on going without bothering to pick it up. *(calmness)*
- *Discovery.* I wonder where those boys ate lunch today. Based on the bag, it looks like burgers and fries. If I would have hit my brakes hard just as I saw the bag coming, I wonder by how far the bag would have missed me. *(curiosity, growth)*
- *Acceptance.* Those kids were just trying to have some fun. And I'm not hurt. I can fully accept them for being how they are. They're just doing what kids do. I probably did something like that when I was younger. Soon enough, they will learn from their actions what brings joy and what brings pain. I'm okay with that. *(peace, freedom, relaxation)*
- *Gratitude.* I'm so grateful that I didn't get hurt, and that I have the good health to be out on my bike riding on this beautiful day. I'm riding a great bike, and I get to enjoy riding on excellent roads. Sure, odd things happen, but I appreciate being able to have weird things happen to me in the first place, so I can learn to be more in control of my thinking. *(joy, happiness, freedom)*

In place of this situation, we could substitute any other event and find the same opportunity to choose—and the same resulting emotional states.

—MO

On its way, it approaches a huge rock positioned in the middle of the river. What the cork *does not* do when it meets this rock is to yell at the rock for getting in the cork's way, thinking it should not be there (resistance). It also does not whine and moan because of its beliefs that rocks should not impede this cork's path (attachment/rightness). The cork also does not call the rock angry names for getting in its path (judgment). The cork naturally follows the current that flows around the big rock and continues on its way (acceptance/allowance).

Gratitude Gratitude means showing appreciation or thankfulness for the opportunity to experience this moment. In this frame of mind, we see each moment as a gift with something in it that will help us grow, develop, and enjoy life even more. The results of having an attitude of gratitude are contentment, peace, and joy. These feelings are the opposite of those below the line of stress—tension and anxiety. When we are thankful for what happens, we don't need to bother about what is *not* happening. We appreciate, and that is enough for us at that moment.

Jenny might respond with appreciation by saying, "I'm sure glad I'm healthy enough to remain standing here as long as I am" or "I'm usually in such a hurry. This is an ideal time to slow down and enjoy not doing anything for a little while. What a great feeling!" If Jenny were to respond to the slow-moving ticket line in this way, notice how calm and serene she would feel! Gratitude, thankfulness, and appreciation are enormously powerful responses to create and keep feelings of well-being and serenity.

When we respond above the line, we stay in greater control of our internal environment and, as a result, we prevent stress from happening. We regulate our inner life regardless of what happens around us.

If we find ourselves in a situation that does require change or action, and we *can* do something to improve it, we should do what is necessary to make the proper change. For example, if a person walks past an alley and sees someone getting robbed, the response of acting to change what is happening (calling 911, for example) is far more appropriate than going with the flow and accepting what is happening. This focus on how to respond does not imply an attitude that allows people or situations to get the best of us. Sometimes getting serious and taking decisive action, or being attached to a right way to do something, can be the most

> When it rains, I let it.
>
> *—113-year-old man in response to a question about the secret of his longevity*

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

valuable way of responding to a situation or event. We are talking here about situations over which we have no control. If you are sitting in a traffic jam, for example, you will want to choose effective ways of responding to remain calm and enjoy the experience more fully.

The way we respond to events in life results in either an empowering, proactive attitude or a disempowering, reactive attitude. We typically are not conditioned to respond at the more effective levels. Effectively incorporating these ideas into your daily activities takes practice. If we respond ineffectively, we create a chaotic inner environment that activates the stress response. If we respond effectively, we maintain inner peace. Realizing this, we understand that our mental and emotional experience is entirely within our control.

6.6 Rational Emotive Behavior Therapy

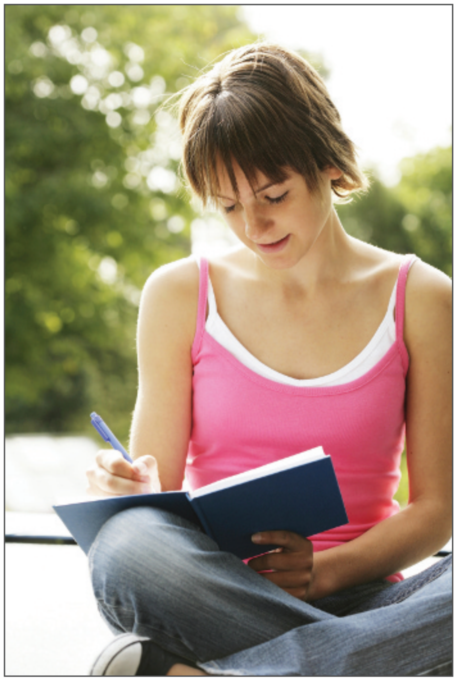
Albert Ellis developed **rational emotive behavior therapy** (REBT) based on the premise that stress-related behaviors begin with self-defeating perceptions that can be changed. Viewing situations and events consciously gives a more precise look at events to see them in more effective and productive ways. REBT emphasizes replacing defeating, victimizing thoughts and feelings with more accurate and powerful thoughts. The result of this approach to how we think is a more peaceful, happy life. Individuals take responsibility for their thoughts and emotions, resulting in the power to change and overcome unhealthy behaviors that interfere with the ability to function and enjoy life.

REBT is based on the following simple, but profound, principles:

1. You are responsible for your own emotions and actions.
2. Your painful emotions and dysfunctional behaviors are the product of your irrational thinking.
3. You can learn more realistic views and, with practice, make them a part of you.
4. You will experience a more profound acceptance of yourself and greater satisfaction in life by developing a reality-based perspective.

According to REBT, difficulties are of two distinct types: **practical problems** and **emotional problems.** Practical problems relate to things that result in feelings of being mistreated by others or being in undesirable situations. These usually are experiences over which you have little if any control. Unfortunately, our human tendency is to get emotionally disturbed about practical problems.

For example, you might be on a subway train that has stopped, and the lights have dimmed considerably. You find yourself getting angry, frightened, annoyed, or overwhelmed at the situation. This emotional disturbance unnecessarily creates a second order of problems—emotional suffering. According to REBT, these are disturbances over which you have total control.


Inspirestock/Jupiter Images

Keeping a gratitude journal can make you feel happier.

REBT Guidelines

You begin taking control, and thereby minimizing emotional suffering, by following these guidelines:

1. *Take responsibility for your emotional upsets and distress.* Only you can upset yourself about events. The events themselves, no matter how undesirable, can never bother you. They do not have this power. Recognize that neither another person nor an adverse circumstance can ever disturb you. Only you can. Others can cause you physical pain—by hitting you over the head with a tennis racquet, for example—but you create your emotional suffering, or self-defeating behavioral patterns, about what others do or say.
2. *Identify your "musts."* Once you admit that you alone alter your own emotions and actions, determine precisely how to adjust them. Begin by noticing some typical "musts" that you might often say to yourself:
   - Must #1 is a *demand on you*: "I *must* do well and get approval, or else I'm worthless." This demand causes anxiety, depression, and lack of assertiveness.

- Must #2 is a *demand on others*: "You *must* treat me reasonably, considerately, and lovingly, or else you're no good." This demand leads to resentment, anger, hostility, and violence.
- Must #3 is *a demand on situations*: "Life *must* be fair, easy, and hassle-free or else it is awful." This thinking is associated with hopelessness, procrastination, and addictions.

  Determine what you demand of yourself, of other people in your life, or of your life's circumstances. Once you have figured out the "must" behind your emotion, you can move forward and effectively reduce your distress.

3. *Determine the reality of your "musts."* The only way you remain disturbed about difficulties is by persistently agreeing with one of these three "musts." Once you have determined what "must" you demand, you can confront and question your demands. Ask yourself: "What is the evidence for my *must?*" "How is it true?" "Where is it etched in stone?" And then realizing: "There is no evidence." "My *must* is false." "It is not carved permanently anywhere." Release yourself from your *must*, and your emotions will heal.
4. *Upgrade your "musts" to preferences.* Now you continue with your thoughts based on preferences:
   - Preference #1: "I strongly *prefer* to do well and get approval, but if I fail, I will accept myself fully."
   - Preference #2: "I strongly *prefer* that you treat me reasonably, kindly, and lovingly, but because I do not run the universe, and it is a part of your human nature to err, I cannot control you."
   - Preference #3: "I strongly *prefer* that life be fair, easy, and hassle-free, and it's frustrating that it isn't, but I can bear frustration and still enjoy life considerably."

Rational emotive behavior therapy supports conscious, controlled thinking. This cognitive restructuring is an effective way to dispute negative thoughts at the moment they occur.

ABCDE Technique

The **ABCDE technique** is a simple way of remembering the REBT mental process. Dr. Ellis devised this method of coping with anxiety, which consists of examining irrational beliefs.[4] The technique involves first examining irrational beliefs that make us anxious, then changing those beliefs and envisioning more positive consequences of our actions. The ABCDE technique consists of the following steps:

A = Activating event (identify the stressor)
B = Belief system (identify rational and irrational beliefs)
C = Consequences (mental, physical, and behavioral)
D = Dispute irrational beliefs
E = Effect (change consequences)

When an activating event (A) occurs, it can cause a reaction or consequence (C) in a person. After careful examination, however, we may find that (A) did not actually cause (C). What really caused (C) to happen was the person's belief system (B).

For example, say a person performs poorly on a test. That event is (A), what actually happened. This fact might activate the belief system that sounds something like, "I really did poorly on that test. That is just horrible! *I always* do that. I'm incompetent at everything I do. I'll never succeed. I'm worthless." The emotional result of thinking this way might include anxiety, loss of self-esteem, and even depression. This is the consequence (C). We sometimes call this negative, irrational thinking *awfulizing* (which you learned about earlier in the chapter). This person is overreacting to the facts of the situation.

Consider another example in which a college student asks a girl out for a date, and she turns him down (A). Irrational thinking based on a faulty belief system might sound like this: "I must not be good enough for her. Girls always turn me down. I'm such a loser." The emotions (C) he may experience include anxiety, depression, and low self-esteem. This way of thinking might even lead to a vicious circle of other events that reinforce his negative belief system about his inability to have a fun experience with the opposite sex. As a result, he may avoid asking another person out on a date, or avoid social situations altogether.

This irrational way of thinking, however, can be fixed by learning to dispute (D) the irrational thought successfully. In rational thinking, the student who did poorly on the test could change her way of thinking to a correct series of thoughts, which sound something like this: "Boy, that test was rough! Everybody occasionally struggles on tests. The important thing is that I learn from today's experience. How can I improve my performance on the next test?" With these thoughts running through her head, she will feel powerful, assertive, and ready to continue pursuing her academic activities.

The young man who got turned down for the date could more accurately say these things to himself: "She must have a lot going on in her life. There are a lot of other girls who would be happy to spend some time with me. Everyone gets turned down occasionally. It's no big deal." He will be confident enough to find another person to go on a date with, and he will feel much better about himself. He will feel more courageous, confident, and self-assured with these thoughts foremost in his mind.

Once we dispute (D) the irrational belief, we are free to enjoy the positive psychological effects (E) of the more rational view. By reinforcing realistic, self-benefiting beliefs, you can end your emotional and behavioral problems in the present and avoid future issues of that sort. In the process, you'll experience far less stress.

> The basic difference between an ordinary man and a warrior is that a warrior takes everything as a challenge, while an ordinary man takes everything as a blessing or a curse.
>
> —*Carlos Castaneda*

6.7 Conclusion

How we think matters! When we find ourselves under stress, our first reaction is often to look outside ourselves for something or someone to blame. However, as you have learned in this chapter, stress is not created by external events; it is created inside of us by our own thoughts. Thoughts give you the power to control experiences. Once you understand this idea, you can move on to transcend your sense of victimization and reach a place of control and empowerment.

Managing our self-talk, stopping negative thoughts, and going with the flow are powerful mental tools to help us prevent the stress response from activating. These tools help you tap into the power you already have to be a more centered, confident person. Awareness of our levels of responding, rational emotive behavior therapy, and other cognitive techniques introduced in this chapter can help you take control of your thoughts and help you experience inner peace.

ACTIVITY

6.1 A Day Above the Line

Activity Spend an entire day focusing on the principle of present moment acceptance and responding to every situation in ways that are above the line. Refer to the Levels of Responding Chart in this chapter. Do this activity on a busy day when you will have many opportunities to select your responses.

During all your other daily activities, keep a constant awareness of more effective ways to respond to people, situations, and experiences (noticing, discovering, accepting/allowing, and appreciating). Avoid responding to situations ineffectively (judging, criticizing, being right, complaining, and resisting). Use a cue to remind yourself throughout the day to respond effectively. This may be a rubber band on your wrist, a particular shirt, or some other unique reminder. As you start your day, this cue also helps you prepare to begin the activity purposefully.

At the end of the day, write about your experience. Include the following:

1. The cue you used to remind yourself to keep responding above the line.
2. Each opportunity you had to choose between effective and ineffective responding.
3. Several examples of above-the-line choices that you deliberately made. Be specific in describing a few events that happened during the day where your habit may be to respond ineffectively, yet you chose to apply what you learned to respond above the line. In boldface, indicate the level describing your response (gratitude, allowance, etc.) to make it clear you understand and have deliberately applied levels above the line.

4. Your most common or typical levels of responding.
5. What you noticed about your sense of inner peace, harmony, and happiness.
6. Any added challenges and insights that you had about yourself while you focused on responding more effectively.

ACTIVITY

6.2 Choosing to Respond More Effectively

Activity As an alternative to ACTIVITY 6.1, reflect on a past situation. The purpose of this activity is to give you a clearer view of how you can choose to respond to situations in more effective, less stressful ways. Refer to the Levels of Responding Chart (Table 6.2) in this chapter.

Recall a situation in which you recently found yourself experiencing some version of anger, frustration, boredom, guilt, or some other unpleasant emotion. Notice which of the ways listed in the Levels of Responding Chart describe how you responded to what was happening, for example, getting angry because things weren't happening the way you thought they should be happening.

Take a moment and relive the situation or event, and describe how you could have responded differently based on the effective ways of responding in the chart. Describe what might have happened had you responded in the above-the-line ways, and how you would have felt because you responded more effectively.

Go through each way that you could respond to that situation and how you could see the situation differently by reconstructing your thoughts according to the following table:

Ways We Respond to Events	Sounds Like (What We Say to Ourselves)	What You Might Say to Yourself
Gratitude	I appreciate . . . I'm thankful for . . .	
Allowance/Acceptance	It's okay . . . I embrace . . . I can live with this . . . I can go with the flow	
Discovery	I wonder . . . What would happen if . . .? What can I learn from this?	
Observation	I am noticing . . .	
Resistance/Complaining	I wish things were different (complaining)	
Judgment/Criticism/Blaming	This is really a /He is really a (insert a negative noun) . . .	
Attachment/Rightness	This *must* be a certain way . . . Use words like must, have to, need to, and should	

Key Points

- Psychologist Albert Ellis identified 12 irrational ideas, called thinking errors, which can create and add to the stress.
- Several cognitive techniques, including positive self-talk, thought-stopping, power language, and going with the flow, can be used to help prevent and reduce stress.
- Conditioned-response theory proposes that when things happen in our environment, we are conditioned to respond in specific ways.
- Conscious choice gives us the ability to choose a healthy response to stressful events.
- The levels of responding concept explains the range of responses, both effective and ineffective.
- Rational emotive behavior therapy (REBT) is based on the premise that stress-related behaviors are started by self-defeating perceptions that can be changed.
- A method of coping with anxiety that consists of examining irrational beliefs is called the ABCDE technique.

Key Terms

pessimism
awfulizing
cognitive therapy
self-talk
stream of consciousness
thought-stopping
learned optimism
optimists
pessimists
power language
going with the flow
conditioned–response theory
levels of responding
rational emotive behavior therapy
practical problems
emotional problems
ABCDE technique

References

1. "Optimism and Its Impact on Mental and Physical Well-Being," by C. Conversano, et al, *Clinical Practice and Epidemiology in Mental Health 6* (2010): 25–29.
2. *Man's Search for Meaning*, by V. E. Frankl (New York: Simon & Schuster, 1963).
3. *As A Man Thinketh,* by J. Allen. Retrieved April 16, 2011, http://www.asamanthinketh.net.
4. "REBT in the Context Retrieved November 27, 2019, of Modern Psychological Research," by D. David. https://albertellis.org/rebt-in-the-context-of-modern-psychological-research/.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

chapter 7

Mindfulness

Geir Olav Lyngfjell/Shutterstock.com

Ten thousand flowers in spring,
The moon in autumn,
A cool breeze in summer,
Snow in the winter,
If your mind is not clouded by unnecessary things,
This is the best season of your life.
—*Wu-men, 12th-century Chinese scholar*

I have so many things going on every day, but they are *all* especially important to me. How can I do all of them and enjoy each one, rather than get so stressed about having so much to do?

I think of mindfulness as living in the moment. If I do this, how can I plan for the future and carry out my goals?

How does mindfulness relate to meditation?

Does mindfulness mean living recklessly for the moment?

Learning Objectives

Study of this chapter will enable you to do the following:

7.1 Explain the relationship between mindfulness and reality.

7.2 Distinguish between mindfulness and mindlessness.

7.3 List the qualities of mindfulness.

7.4 Explain the benefits of mindfulness.

7.5 Experience mindfulness as a tool to unclutter the mind and bring about mental tranquility.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

Real People, Real Stories

Mindfulness in Action

Trina

When students were discussing what they had learned from their assignment on mindfulness, Trina made a profound statement: "I looked everywhere for what was missing in my life, and I found out it was me." She went on to explain that she came to realize that she was rarely "in the moment." She was missing the moments of life because her mind was somewhere else—worrying about something that might happen, what she had to do, or feeling guilty about something she had done in the past. Mostly, her mind was so full of thoughts of what she had to get done that she rarely focused on the moment at hand. Through deliberately applying the qualities of mindfulness to her daily life, Trina was able to find what was missing—herself.

***

Dimitri

Dimitri shared this story about his experience with mindfulness:

On my 5-mile run around my neighborhood, I usually run with my music but decided today I would turn it off and tune in to my surroundings. As I ran, I noticed how the cold felt hitting my legs and how the wind was blowing so hard. I saw the yellow, orange, and brown leaves in the trees. I heard birds chirping. I noticed how hard it was to run against the wind and how it pushed me when I was in stride with it. I noticed my feet hitting the ground, making a drum sound, and how comfortable my shoes were. I noticed the smell of crisp fall air. I noticed how much I like the outdoors and being surrounded by nature. I noticed the grey clouds in the sky. I saw a lady getting out of her car and smiling at me as she walked to her house. I noticed the whipping of American flags in three different yards. I felt how my hands got warm in my gloves toward the end of my run. My thoughts were focused entirely on my surroundings. The workout was fast and easy, and I felt calm, focused, and free! I felt so much enjoyment during this run! It made me love running even more. It felt like I was taken to another world for an hour with nothing else on my mind but what I was taking in with my senses. I was so focused on my surroundings and the beauty of nature that I forgot about anything I have coming up or that has happened in my life.

***

Both Trina and Dimitri learned that stress can be prevented, and that life can be improved by conscious, present-moment awareness and a mindful approach to living.

7.1 Mindfulness

Two monks were walking through the woods when they came upon a woman standing by a stream. "Please, sir, would you kindly help me across the stream?" she asked. One monk silently nodded his head, hoisted the woman on his back, and walked across the stream with her. She bowed, thanked him, and walked on. The two monks watched her walk out of sight and then continued their journey. Many miles and hours later, the monk who had not carried the woman said, "I've been thinking, how could you have touched that woman? You know our order frowns on touching women." The other monk smiled and said, "I put her down a long time ago. Why are you still carrying her?"

7.2 The Nature of Reality

We begin our discussion about mindfulness with this important question: What is reality? Or to ask it a bit differently, what is real? How would you answer this question?

You might say that reality includes our thoughts, our dreams, our desires, our imaginations, God, or the physical world that surrounds us. You might say the people you meet each day are real, but the people you view on TV or at a movie aren't. When you think about it carefully, it's a little confusing to pinpoint what is real.

A simple definition of **reality,** which we will use for this text, is this: Reality is *what is*. Reality is *what is happening*. **Unreality,** then, is what is not (happening). Some people call unreality illusion.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

How do we determine what reality is? Put another way, how do we know what is happening? We find the answer in two places.

The first place to find reality is through our senses. The sounds we hear are real. We see a bird flying and clouds floating behind the bird. This view of what we see is real. When we touch the top of the table with our hand, the sensation of touch tells us of the hardness of the table. We hear a dog barking, or we smell chocolate chip cookies baking in the kitchen. The concept that clues us in to reality is *experience.* What we experience is reality. The book you are reading right now is reality.

A second place we can look to find out what is happening is internally. Many sensations are happening right now within us. Sensations such as balance, equilibrium, and physiological processes such as digestion, circulation, and respiration, are examples of our internal experience.

Jamie Grill/Spirit/Corbis

Reality is what we experience here and now with our senses.

The things that are *not* reality are the things we make up *about* our experience—our judgments, our opinions, our ideas, our stories. For example, we see a car driving at a certain speed in front of us. That is reality. Our senses of sight, hearing, and the inner sensation of movement through space capture the experience about what is happening in our environment. Stories that we make up in our minds about this situation are not reality. These stories are our own creations about the situation. We might think that the slow-driving person ahead of us is old and incapable of driving correctly, that this person is keeping us from getting to where we want to go at a faster pace, and older people should not be on the road in the first place. These are thoughts we make up about the situation, not the reality of what *is* happening.

Normally we do not so much look at things as overlook them.

—*Alan Watts*

7.3 The Here and Now

The next question is a simple one, but one whose answer we often forget, which can lead to much stress: Where are you right now? The only correct answer to this question is *here.* Where are you *not* right now? The only correct answer is *everywhere else.* How do you know you are *here*? Because your senses, your experience, verify that this is the case. Right here is reality.

Wherever you go, there you are.

—*Jon Kabat-Zinn*

Here's another simple and related question: At what point in time are you always? The only correct answer to this question is—*now.* At what point in time are you *not*? The correct answer to this question is your *future* and your *past.* This moment right now is reality.

Every moment of our life, we are in our here and now. That is all life is for each of us—successive present moments of *here-and-now* experiences. It will never be different for anyone. Here and now is reality—the only one. You cannot transport yourself into your past or your future and directly experience them. For example, you can't experience last night's dinner now. You can't go forward in time to a year from now, or even a week, discover which stock is doing the best, and then come back to now and buy a huge pile of that stock. Nobody can do that.

You also cannot possibly be anywhere else but right *here.* While you are in your car driving to the store, you can't experience being at the store. When you are at school, you can't at the same time have the direct experience of being at home. You can think of being at the store while you are in your car, or imagine things about being at home while you are at school, but these are the stories you make up—not the direct experience.

The philosopher Alan Watts spoke of the here-and-now concept:

> Take it that you are not going anywhere but here, and that there never was, is, or will be any other time than now. Simply be aware of what is without giving it names and without judging it, for you are now feeling out reality itself instead of ideas and opinions about it.[1]

So, what does all of this have to do with managing stress?

7.4 Understanding Mindfulness

Why must we consider the fact that our experience of here and now is our only reality? Why is it so important to devote an entire chapter to a recognition of our reality of here and now? Because *there is no stress in the present moment.* If you look accurately at your here-and-now experiences, moment to moment, day to day, you instantly realize you are always safe—you are very rarely, if ever, in immediate danger right here, right now. When our attention is focusing directly on this here-and-now moment, there is no threat, and the result is no stress.

If that's true—if here and now is safe—how does stress happen? Anytime you have thoughts about the future or the past that include a threat thought (recall the first thought we have when we see the bear charging toward us), like an upcoming test or an argument we had an hour ago, our body systems react as if the danger is happening now. The stress response gets activated.

So we need a mental mechanism that moves our mind to safe thoughts, thoughts that don't include any perceived danger. But we aren't trained to think in this way. Once we leave early childhood, practically every conscious thought is focused on something other than what's happening here and now. The author Michael Brown said, "We consistently leapfrog over the present. Even though the past has gone and can't be altered, and the future isn't yet manifest, we choose to mentally occupy these illusory places instead of fully entering and experiencing the one moment we actually occupy—this moment now."[2]

How do we do that? By focusing directly on the here-and-now moment. We have a term that describes being fully aware of each safe moment as it unfolds—it's called mindfulness. **Mindfulness** is defined as the state of being attentive to and aware of what is taking place in the present.[3] Mindfulness is the process of cultivating an appreciation for the fullness of each moment we are alive. It is a present-moment awareness. When we are mindful, we pay attention, on purpose, nonjudgmentally. It is an acceptance of present-moment reality. It is waking up to the fact that our lives unfold only in moments. Understanding mindfulness guides us to become more relaxed and peaceful once we learn how to focus on the present moment directly.

Jon Kabat-Zinn, founder and director of the Stress Reduction Clinic at the University of Massachusetts Medical Center, described mindfulness as a conscious discipline that can be explained as the intentional cultivation of non-judgmental, moment-to-moment awareness.[4] Think of mindfulness not so much as a technique but as a way of being. Mindfulness approaches are not considered relaxation techniques but, instead, a form of mental training to reduce vulnerability to reactive ways of thinking that increase stress and emotional distress.[5] We prevent stress by staying aware of each here and now moment.

> Man looks without seeing, listens without hearing, touches without feeling, eats without tasting, moves without physical awareness, inhales without awareness of odor or fragrance, and talks without thinking.
>
> *—Leonardo da Vinci*

Mindfulness is based on the ancient meditative tradition called ***vipassana***, which means "seeing clearly." Mindfulness is the process of learning how to be fully present in all experiences while being less judgmental and reactive. Mindfulness practices include self-reflection, acceptance, self-care, and opening to difficulties without avoidance. Mindfulness suggests being present in the here and now, listening for and attending to whatever arises, and staying focused and relaxed.[6]

We can begin to understand mindfulness with an example of how we function mentally when we drive our car and notice that a police officer is driving directly behind us. His lights are not flashing to pull us over. He is just following us. When we drive with this level of alertness, we are entirely aware of everything that is going on. We are aware of the distance between our car and the one in front of us. We are aware of how fast we are driving. We are totally aware of facets of driving such as how soon before the intersection we will have to turn on the signal to indicate that we are making a turn, how quickly we shift lanes, if our lights are on, and slowing down to the posted speed. We are entirely tuned in to our immediate environment.

Mindlessness, by contrast, happens when we are driving along a stretch of road and, before we realize it, we have traveled 15 miles and have no idea about the stretch of road we have just driven. We suddenly catch ourselves and marvel that we didn't have an accident because we weren't paying attention. **Mindlessness** occurs when our thoughts are not in the present moment and when we tune out what is happening. Our mental focus is on times and places other than the here and now. We ignore the present moment because our attention is focused elsewhere. This is what Trina was talking about in our opening vignette when she said, "I looked everywhere for what was missing in my life, and I found out it was me."

7.5 Qualities of Mindfulness

The focus of mindfulness is on the experience. Professor Stefan Schmidt, of the University of Freiburg in Germany, identified attitudinal conditions that facilitate mindfulness, including *beginner's mind, nonjudging, acceptance, nonattachment, and nonstriving.*[7] These five qualities can be cultivated as you develop a more mindful approach to life.

Randy Miller/Photographer's Choice/Getty Images

Celebrating this moment!

Beginner's Mind: Thinking Like a Child

Mindfulness suggests openness in how we observe experiences. Rather than observing experiences through the filter of our beliefs, assumptions, expectations, and desires, mindfulness involves seeing things "as if for the first time," a quality often referred to as beginner's mind.[5] It is an observation full of curiosity, interest, and joy.

We can regain the quality of beginner's mind. We say *regain* because this is how young children operate. They don't concern themselves with "what if" and "if only." Consider how silly it would be if a 1-year-old who is learning how to walk starts questioning the notion that walking has advantages over crawling. She starts thinking things such as, "I don't know if I should try this because if I learn to walk, I'll be much more likely to fall down the stairs, and that will hurt." Or equally as silly would be this thought: "I fell when I tried walking last time. I'm a rotten walker because last time I tried it, I fell flat on my behind. I might as well give up because I'll never be able to walk." Fortunately, this is not how children think. They look at here and now, see what's in it, and experience it fully.

Professional Life Coach Mary Maisey-Ireland shares this story:

> She runs barefoot around the yard, arms outspread, hair streaming behind her, face upturned to the rain. I am witnessing radiant, unadulterated joy, completely expressed by my 9-year-old daughter.
>
> I stand transfixed at the kitchen window, soapy plate in my hands, moved by her happiness. She celebrates wind, too. And sunsets and moonrises and flowers and kittens and, well, life.[8]

The psychiatrist Gerald Jampolsky explains how our best model for mindful living is a small child:

> I have often thought that we have much to learn from infants. They have not yet adapted to the concept of linear time with a past, present, and future. They relate only to the immediate present, to right now . . . As we become older, we tend to accept the adult values which emphasize projecting past learning into the present and anticipated future. It is difficult for most of us to have even the slightest question about the validity of our past–present–future concepts. We believe that the past will continue to repeat itself in the present and future without the possibility of change. Consequently, we believe we are living in a fearful world where, sooner or later, there will be suffering, frustrations, conflict, depression, and illness.[9]

Jampolsky contends that we can choose to experience this instant as the only time there is and live in a reality of *now*.

Nonjudging

The quality of nonjudging happens by direct observation. It means that we do not make up stories about the things we observe; we do

? WHAT ELSE CAN I DO?

Become Like a Child

Our best model for living a low-stress life would be that of a young child. Think of how a child operates on a typical day. His thoughts are always on what is happening right now or what is coming up next.

Here are more childlike characteristics:

Risk taker
Adventurer
Fun lover
Humorous
Playful
Creative
Curious
Enjoys being loved
Teachable
Trusting
Vulnerable
Likes most things about life
Free from guilt
Free from worry
Lives now, rather than in the past or the future

Not threatened by the unknown
Independent
Enjoys privacy
Doesn't seek approval
Knows how to laugh
Accepts himself and others
Enjoys and appreciates the natural world
Doesn't engage in useless fighting
Honest; doesn't blame others
High energy levels
Not afraid to fail
Lack of defensiveness

It is not likely that you will immediately incorporate all these traits into your own nature. But by considering each one individually, and by thinking of each trait often, little by little, you can develop the qualities that will help you live more freely, more happily, and more contentedly, like a child. For example, when you find yourself in situations where you could choose being a risk taker over being too conservative, if it is appropriate, decide to take the risk.

Source: Your Erroneous Zones, *by W. Dyer (New York: Avon Books, 1976).*

not evaluate the observation at all. We simply notice with calmness the direct experiences as they unfold.

We drop our need to judge. When we observe, without adding the mental analysis of the situation, we free ourselves to see things more accurately. A clever way of describing this is to *notice what you notice*.

This is called **detached observation**. Thoughts enter consciousness objectively, without judgment or emotion. A detached, nonevaluative observation is not cold-hearted. Mindful awareness is warm and accepting. Think of the mind as a wide movie screen with your thoughts projected on the screen. You observe them without judgment or analysis. The result is often increased awareness.

Awareness is not limited to a single focal point, as is common in many forms of meditation. Rather, it encompasses mind, body, environment, and whatever arises in the field of awareness. The object of focus is not the point. Instead, it is the quality of the awareness of what passes through the individual's consciousness. The outcome is a way to experience life directly, without it being filtered through beliefs, expectations, and preconceptions.

Imagine calling a friend to ask if she would like to join you for lunch. She is having a particularly rough day. She snaps back angrily, letting you know she doesn't have time for you or lunch. In an instant, you notice yourself becoming angry and judgmental about her and the rude way she treated you. The reality of this situation (what is happening) is that she said some words to you about not joining you for lunch. All the inaccurate things you make up about her, all the judgments you create about her, are your imagined stories, but *are not what is happening*. Her anger had nothing to do with you, but your mind races with all the thoughts about her and your faltering relationship. Letting go and not judging means dropping the need to have all those unnecessary, inaccurate thoughts race through your mind.

Acceptance of What Is Happening

Nonjudging is accepting what is happening. Acceptance is holistic and unconditional. Acceptance means we acknowledge experiences as they are. To bring our focus more into the present, we can simply turn off the mind chatter that races through our minds of all that is not happening—about the future and the past, about thinking we always have

STRESS BUSTING BEHAVIOR

Mindfulness in Daily Life

Mindfulness self-efficacy is your confidence in your ability to remain mindful and "in the moment" when you encounter potentially stress-producing events throughout the day. Moment-to-moment, nonjudgmental awareness can help keep you peaceful, but it takes practice. Consider situations where you can feel confident in your ability to remain calm, nonjudgmental, and in the moment, such as:

○ When you wait in the express line at the grocery store as the person in front of you has too many items
○ When you are hungry and see yourself reaching for junk food
○ When your teacher gives you an extra assignment due by the next class
○ When you argue with a friend
○ When you are caught in slow traffic
○ When you have trouble sleeping and have a big test the next day
○ When your boss tells you that you have done a task incorrectly
○ When someone you love hurts you deeply
○ When the person next to you in the restaurant is speaking loudly on his smartphone

to be somewhere else, about our opinions, judgments, and things we make up about an event. It is attending to and allowing what is happening now.

The author Ron Smothermon commented on the usefulness of mindfulness:

> All the confusion clears up when we realize that there is only one "time" and that time is *now.* If you are willing to experience the truth that it is right now, your "problems" about the past and future will clear up. Why? Because there is no past or future; there is only right now. If you are stuck in what you call the "past," you are stuck right now. If you spend your time daydreaming about the "future," you do that process right now. You can't even go to these places called the "past" and the "future." They are not real.[10]

We simply notice *what is* with all our senses, passively observing what is happening around us. We observe, we notice, we watch, we become sensorially aware of what is happening in our environment. When we notice ourselves getting wrapped up in our thoughts, we step back and let the moments unfold, observing and not trying to change anything. We allow ourselves to be content with this moment.

Nonattachment

The quality of nonattachment refers to nonidentification with the object of our attention. It means not getting carried away with thoughts or emotionally holding onto experiences. The observation is detached from the object.

This important aspect of mindfulness involves resisting the need to cling emotionally to anything—ideas, events, or periods of time. We give up the need for things to be a certain way. We let things be as they are instead of how we think they *ought to* be.

Nonstriving

The quality of nonstriving is not goal-oriented. Nonstriving suggests giving up our need to try to change things that can't be changed. We simply permit ourselves to allow this moment to be exactly as it is and allow all things to be just as they are. In the moment, we are no longer doing; we are just being. We let go of wanting something else to happen. We let go of our need to *do* anything. We are content with *being.* It has been said that we might more appropriately be called "human doings" rather than human beings, as most of us are more inclined to be doing than being.

We live in a culture that encourages doing. By nurturing mindfulness, we can learn to be better at being. The professor and mindfulness expert Jon Kabat-Zinn said it best: "Mindfulness involves intentionally doing only one thing at a time and making sure I am here for it."[4]

STRESS STUDIES

Daydreaming—Is It Good for You?

Daydreaming—we all do it, and more than you might imagine. The human mind is remarkably good at straying from the moment. That ability allows us to remember the past, plan for the future, and "even imagine things that never occur at all," says Matthew Killingsworth, a doctoral student in psychology at Harvard University. "People spend a lot of time with their minds wandering, and that seems to be damaging for their happiness. The ability to think about things other than the present is a uniquely human trait, and seems to come with an emotional trade-off."

In a global study reported in the journal *Science*, the first thing the Harvard researchers noticed was just how often people weren't thinking about what they were doing. Overall, the subjects' minds were wandering about 47% of the time. People spend almost half of their waking hours thinking about something other than what they are doing, and their daydreaming usually doesn't take them to a happy place.

The researchers used iPhones to gauge the mental state of 2,250 adults several times a day. They randomly contacted volunteers throughout the day, and had them describe what they were doing, what they were thinking about, and how they felt on a scale of 0 to 100. People who were daydreaming often reported feeling sad or worried. People who were intensely focused on what they were doing at that moment tended to report feeling much happier.

The study results suggest that, if you want to stay cheerful, you're better off focusing on the present, no matter how unpleasant it is. Daydreaming was not good for people's moods: They were unhappier when their thoughts were elsewhere. By analyzing the data over time, the researchers discovered that people didn't merely fantasize when they were unhappy; instead, wandering minds led to unhappiness. Statistical tests showed that mind-wandering earlier in the day correlated with a more miserable mood later in the day, but not vice versa, suggesting that dissatisfaction with their current activity wasn't prompting people to escape mentally. Instead, their wandering minds were the cause of their gloom. Mental drifting was a downer for subjects during even the dullest activities, like cleaning, the researchers found. "I'm sure there are some situations where mind wandering can be helpful," says Killingsworth. But based on these results, those "are probably pretty rare."

Source: *"Science Now: Daydreaming Is a Downer," by L. Schenkman, Science, http://news.sciencemag.org/sciencenow, accessed November 11, 2010.*

Let's look at an example of how Kabat-Zinn's quote plays out in daily life. Every morning when you wake up, you take a 10-minute shower. During those 10 minutes, you can be thinking about all you need to do that day. You can worry about the psych test you have to take, and you can feel guilty that you watched a movie last night instead of studying. Or you can spend that same 10 minutes being fully aware and present in the moment. You can enjoy the feel of warm water and the smell of the soap. You can listen to the water running and notice that you relax when the water hits your shoulder muscles. You can be grateful for hot and cold running water. Either way, you have spent 10 minutes of your life in the shower. The result can be that you are barely aware of the experience and come out feeling rushed and

CULTURE CONNECTION A Culture of Doing

Physician William Thomas says that simple observation has led him to regard life as the dynamic and unfolding interplay between the state of "being" and the state of "doing." He explains how, as a function of culture and shared expectations, we move through transitions, starting as infants, the purest form of being. Adolescence is a transition to adulthood, from the joyfulness of play to a preference for doing over being. In adulthood, the emphasis on doing over being increases. One of the first questions adults ask when they meet is, "What do you do?"

Thomas says, "Elderhood brings us full circle to a life that favors being over doing. This is a gift of great value. Watching older and younger people together, you get the sense of a secret collusion that excludes adults. I remember visiting a nursing home that also had a child daycare center. A group of older people and children were painting flowerpots when the adult overseer announced that time was up. All but one of the children trooped out of the room. Andrew, who was curled up in an elder's lap, wouldn't move. As he was being prodded to leave, I heard him say, 'I want to be with Frank.' The time they were spending together soothed them both. The adults could not be expected to understand."

Source: "The Search for Being," by W. Thomas, *AARP Bulletin* (November 2004) pp. 30–31.

stressed, or you can come out having had a pleasant experience, feeling relaxed and refreshed. Every bit of the rest of your day can follow this same pattern.

Vlue/Shutterstock.com

Mindfulness brings peace to the moment. Don't miss the beautiful moments in life because your mind is elsewhere.

7.6 Mindfulness as a Way of Being

We can practice mindfulness every moment of every day by bringing awareness to every activity and experience. Mindfulness in everyday life means being present in all of one's activities and interactions.

Thich Nhat Hanh, a Vietnamese Buddhist monk, spoke about mindfulness when he said:

> If while washing dishes, we think only of the cup of tea that awaits us, thus hurrying to get the dishes out of the way as if they were a nuisance, then we are not "washing the dishes to wash

STRESS STORIES

Peace in the Moment

This concept of being mindful hit me with such power on one occasion that it changed my entire outlook on life. I was in the middle of work on my bachelor's degree and was preparing to take a major test for one of my classes. Much of my grade for the course, and ultimately for my succeeding in that major, was based on how I did on this test. I studied a ton for this test. I thought I knew all I needed to know.

The day came to take the test. I parked my car and walked to the testing center. Talk about stress—300 people in a large room all doing nothing but taking tests! I gave the person my ID card. I got my test, took a Scantron answer sheet, and found a little desk, where I would spend the next few hours. It was a tough test, but I thought I knew the material. Finally, I finished and turned in my completed test. I waited for a few minutes and then got my results.

Sheer anger, horror, remorse, and anguish all hit me at once as I saw that I had gotten a D on this test. "How could this professor have been so evil?" "I can't stay in the major with a D hanging over me!" "What am I going to do now?" These and a thousand similar-sounding questions and derogatory thoughts flew through my head like a river gushing down a steep mountain.

As I walked back to my car in this sour state, I happened to look up. It was late October, and the trees were changing colors. Off in the distance, to the west, the sun was getting ready to set, and its reflection was bouncing off the large lake that rested on the other side of the city. As I turned my view to the east, the vast mountains reflected the hues of the setting sun in a way that made them look flaming reddish-gold. Nature offered me an incredibly spectacular sight that afternoon.

At that moment, I caught myself in my tirade of unpleasant thoughts. It occurred to me that I had a choice. I could continue to work myself into a frenzy over the test, which was over, and my now uncertain future, or I could stop and watch this beautiful scene of dazzling colors, trees, mountains, lake, sunset, and brilliant beauty in front of me. I chose to sit on a bench and watch that fantastic event of day turning to evening. I took it all in, all the colors, the aromas, the gentle breeze, everything I could capture in that moment. My mind became still. My anger and fear turned to gratitude. After it was complete, I walked to my car in a most peaceful state of mind. I was different. I somehow knew that everything would turn out fine.

—MO

> the dishes." What's more, we are not alive during the time we are washing the dishes. In fact, we are completely incapable of realizing the miracle of life while standing at the sink. If we can't wash the dishes, the chances are we won't be able to drink our tea either. While drinking the cup of tea, we will only be thinking of other things, barely aware of the cup in our hands. Thus, we are sucked away into the future—and we are incapable of actually living one minute of life.[11]

Thich Nhat Hanh spoke of something so mundane, so seemingly mindless, to describe his experience of being mindful.

Washing dishes, riding a thrilling roller coaster (refer to the Stress Story), and all other events in life offer the opportunity to choose between living fully in the present and experiencing all that is available, or focusing on the unrealities of our past and future, increasing the likelihood of avoidable stress. The choice is, once again, ours.

Personal growth author Ken Keyes spoke about this idea when he said:

> Serenity is the end—and serenity is also the means—by which you live effectively. By fully tuning in to the now moment in your life, you will discover that you always have enough to enjoy every moment of your life. The only reason you have not been happy every instant is that you have been dominating your consciousness with thoughts about something you don't have—or trying to hold on to something that you do have but which is no longer appropriate in the present flow of your life. Here and now is the key to the optimal interaction pattern between you and the people and things in the world around you.[12]

When we live mindfully, focusing our attention on what is happening here and now, and allowing ourselves to be absorbed in the activity at hand, we become more effective and productive, whatever the task, be it skiing down a tricky slope, passing the time with our best friend, or thinking clearly during a tough test. The busy mind chatter of future and past, and the associated stressful emotions of fear, worry, guilt, and anger, seem to diminish.

When we operate mindfully, we become the witness to the events that unfold around us. We simply notice things as they are. The words we use when we focus on what is happening in this moment are "I am noticing . . ." We then allow our senses to bring to our awareness whatever things, people, or situations they encounter.

7.7 Why Be Mindful?

Focusing on the moment helps to clear your mind of clutter. Typically, the mind tries to juggle many thoughts, produced both internally (memories and worries) and externally (conversations, social media, TV broadcasts, etc.), all of which compete for attention. This can lead to exhausting attempts to concentrate on several thoughts at once. As these thoughts accumulate, our minds get cluttered, and the result is **sensory overload**. Sensory overload is like a blackboard filled with notes, scribbles, and information that is difficult to organize and understand. A cluttered mind becomes a stressed mind. Practicing mindfulness is like

STRESS STORIES

California Screamin'

Years ago, I was at Disneyland with my family. We went on a ride called "California Screamin'," which was a total blast of a ride. After our turn had ended and we were discussing how much fun we had, it occurred to me why the ride was so much fun. While we were zooming through the twists and turns, the high speeds and the upside-down loops, we had no focus on the future or the past. Our only awareness was of the exhilaration of that moment and what was happening here and now.

Imagine how silly it would have been to be zooming around on this ride, having the time of our lives, and at the same time worrying about whether we would find a parking spot when we went to our hotel, or which restaurant we would go to that evening, and if all of our kids would find something on the menu they would like to eat, or if we would have to go somewhere else to please their appetites. Equally absurd would be a thought process that focused on the angry conversation I had with one of my daughters, and how I should have been more considerate of her feelings, which led to my own character flaws as a father. If my mind were to go in either direction, I would miss the ride completely. With my thoughts wrapped up with images of future and past, I wouldn't enjoy the thrill of the ride as I flew through its joyous speedy voyage.

—MO

an eraser that cleans the mind's blackboard. Mindfulness unclutters the mind and brings about mental tranquility.[13]

Joseph Goldstein, a founding teacher of Insight Meditation Society, says:

> Cultivating an active mindfulness of one's experience, moment to moment, is the path to awakening: taking a step, standing up, or reaching for a door. When we're not mindful, different things happen. We can be going through the daily activities of life completely lost in thinking about the past or the future, about our hopes, our worries, our anxieties—without being present at all.[14]

Robert Pirsig says this in his book, *Zen and the Art of Motorcycle Maintenance:*

> Mountains should be climbed with as little effort as possible and without desire. The reality of your own nature should determine the speed. If you become restless, speed up. If you become winded, slow down. You climb the mountain in an equilibrium between restlessness and exhaustion. Then, when you're no longer thinking ahead, each footstep isn't just a means to an end but a unique event in itself. This leaf has jagged edges. This rock looks loose. From this place the snow is less visible, even though closer. These are the things you should notice anyway. To live only for some future goal is shallow. It's the sides of the mountain that sustain life, not the top. Here's where things grow. But of course, without the top, you can't have any sides.[15]

> No one imagines that a symphony is supposed to improve in quality as it goes along, or that the whole object of playing it is to reach the finale. The point of music is discovered in every moment of playing and listening to it. It is the same, I feel, with the greater part of our lives, and if we are unduly absorbed in improving them, we may forget altogether to live them.
>
> *—Alan Watts*

We can apply Pirsig's description of mountain climbing to anything we do. He mentions that we need the top of the mountain—the goal toward which we set our sights. But the critical part is where we are on the way to the target. Every step along the way is where we are. If we are too focused on a "better tomorrow," we will miss out on a "meaningful today."

Timothy Gallway wrote of the consequences of losing focus on the present moment. He was speaking of what happens during a tennis match, but his thoughts apply to most situations in which we find ourselves. These are the natural consequences of letting our minds dwell on future and past and elsewhere instead of here and now:

> The greatest lapses in concentration come when we allow our minds to project what is about to happen or to dwell on what has already happened. How easily the mind absorbs itself in the world of what if's. "What if I lose this point?" it thinks; "then I'll be behind 5–3 on his serve. If I don't break his serve, then I'll have lost the first set and probably the match. I wonder what Martha will say when she hears I lost to George." At this point, it is not uncommon for the mind to lapse into a little fantasy about Martha's reaction to hearing the news that you have lost to George. Meanwhile, back in the now, the score is still 3–4, 30–40, and you are barely aware that you are on the court; conscious energy you need to perform at your peak in the now has been leaking into an imagined future.[16]

One of the Jedi Masters in the *Star Wars* films gives us a clue about mindfulness. The trainee Obi-Wan is talking with his master Qui-Gon during a tense moment. Qui-Gon advises him about the mind and where to focus:

> Obi-Wan: I have a bad feeling about this.
>
> Qui-Gon: I don't sense anything.
>
> Obi-Wan: It's not about the mission, Master, it's something . . . elsewhere . . . elusive.
>
> Qui-Gon: Don't center on your anxiety, Obi-Wan. Keep your concentration here and now where it belongs.
>
> Obi-Wan: Master Yoda says I should be mindful of the future.
>
> Qui-Gon: But not at the expense of the moment. Be mindful . . .

7.8 Benefits of Mindfulness

You learned in earlier chapters that, apart from those rare events of real danger, we live our present moments without any real threat or danger. The present moment usually involves no concern for stress. Stress occurs only when we allow our minds to think of things other than what is happening in our current experience. We focus our thoughts on potential future events, about the past, and about things that might be happening elsewhere. When we associate pain or discomfort with those thoughts of other times and places, we start the stress response as a natural reaction to the perception of a false emergency. Mindfulness turns off the stress response and, as a result, facilitates relaxation, reduces stress hormones, and boosts the immune system.

In a review of studies examining the physiological and psychological benefits of mindfulness that focused on Kabat-Zinn's mindfulness-based stress reduction program, author, educator, and researcher Dr. Lyn Freeman concluded:

> MBSR may be effective for general stress reduction with nonclinical populations and for managing stress and mood disorders in patients with cancer. The evidence for benefits with clinical populations is suggestive, but more research is needed. On its face, MBSR appears to have great potential as an intervention in clinical and medical settings. Well-designed studies to support the uncontrolled findings must be performed before final conclusions can be drawn.[17]

Although the mechanism through which mindfulness enhances psychological and behavioral functioning remains unclear, research shows that the enhancement of mindfulness is associated with a variety of well-being outcomes such as reductions in pain, anxiety, depression, binge eating, and stress.[18]

Research that examined the impact of MBSR on perceived stress, positive state of mind, pain, and mindfulness self-efficacy found that, after the MBSR intervention, participants reported significantly reduced perceived stress and enhanced positive states of mind compared to baseline results. The researchers concluded that the practice of mindfulness meditation may have helped study participants reduce their perception of stress, maintain non-judgmental awareness during different situations, and experience higher levels of positive states of mind.[18] Another review of studies on MBSR found that mindfulness leads to reduced levels of emotional exhaustion (a dimension of burnout), stress, psychological distress, depression, anxiety, and occupational stress. Mindfulness also improved personal accomplishment, self-compassion, quality of sleep, and relaxation.[19]

Attending to the present moment combines an internal focus and attention to the outer world simultaneously. Incorporated in mindfulness practice are attitudes such as proceeding without judgment and expectation. Calming the mind and body allows us to gain insight and become aware of repetitive thoughts and feelings as well as habitual behaviors.[6]

Because mindfulness involves self-monitoring that helps increase awareness of what is going on from moment to moment, it has been used effectively in several stress reduction programs, including those at the University of Massachusetts, Harvard, and the University of Utah.[20]

7.9 Experiencing Mindfulness: Testing the Principle

Whenever our thoughts are not focused on what is happening in the present moment, we increase the chances of activating the stress response. When we turn our mental focus entirely on what is happening in the present moment, the stress response turns off. Here is an exercise to prove this:

Sit at a desk or table with a pen and piece of paper. Place your nondominant hand in a position where you can easily see it, and

FYI

Mindful Meditation

Mindfulness-based stress reduction (MBSR), developed by Jon Kabat-Zinn and his colleagues at the University of Massachusetts, is a participatory wellness program based on mindful meditation. Participants in MBSR are taught how to work with aspects of awareness. MBSR has been used successfully to decrease a wide range of physical and psychological symptoms and increase clients' well-being. Studies with healthy populations link MBSR to improved physical, emotional, social, and mental health.

Source: *"Research Roundup: Mindfulness-Based Stress Reduction,"* American Psychological Association, *(October 23, 2014).*

STRESS STUDIES

Mindfulness May Reduce Opioid Cravings

People suffering from opioid addiction and chronic pain may have fewer cravings and less pain if they use both mindfulness techniques and medication for opioid dependence.

A study examined the effects of mindfulness and methadone therapy on 30 patients with opioid addiction and chronic pain. The findings showed that those who received methadone and a mindfulness training-based intervention were 1.3 times better at controlling their cravings and had more significant improvements in pain, stress, and positive emotions, even though they were aware of more cravings than those who only received standard methadone treatment and counseling.

"Methadone maintenance therapy (MMT) has been an effective form of medication treatment for opioid use disorder," said associate professor Nina Cooperman, a clinical psychologist in the Division of Addiction Psychiatry at Rutgers Robert Wood Johnson Medical School. "However, nearly half of individuals on MMT continue to use opioids during treatment or relapse within six months."

Cooperman said many of those with opioid addictions experience chronic pain, anxiety, and depression while on methadone maintenance, which is why mindfulness-based, nondrug interventions are promising treatments.

The researchers said mindfulness-based interventions could help people dependent on opioids increase their self-awareness and self-control over cravings and be less reactive to emotional and physical pain. Individuals with an opioid addiction could also be taught to change their negative thoughts and savor pleasant events, which may help them to regulate their emotions and experience more enjoyment.

Source: *"Mindfulness May Reduce Opioid Cravings, Study Finds," by M. Alobawone,* Rutgers Today *(October 14, 2019).*

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

write down everything you notice about your hand. Using your senses of sight, touch, hearing, smell, and even taste, write down everything your senses tell you about your hand. Continue doing this for several minutes. When you think you have gotten everything, stop and observe again with all your senses, and continue writing.

When students do this in the classroom, a couple of questions enhance their learning of this principle.

1. "How long do you think you could continue doing this and still come up with things to write?" Some reply that they could have gone on for much longer. Others claim that they got it all.
2. This question is directed to those who say they wrote down everything about their hand: "How many of you wrote down that you have four fingers and a thumb?" Usually, only about 5 to 10% say they noticed that specific detail. This seems so obvious, yet so few notice.

Elena Elisseeva/Shutterstock.com

Mindfulness involves noticing the unfolding of what is happening in your immediate environment.

The point of this exercise is not to discover our hands again but, instead, to make an observation. This activity requires students to be totally focused on something here and now. When asked how much stress they felt as they were doing this activity, students report that they did not feel stressed.

> You must live in the present, launch yourself on every wave, find your eternity in each moment. Fools stand on their island opportunities and look toward another land. There is no other land, there is no other life but this.
>
> —*Henry David Thoreau*

This simple activity proves an important principle: When we focus our attention on what is happening—when we keep our awareness on the here and now—we get an experience without stress. Because stress occurs when we associate a future pain or discomfort with some event (worrying), and the need to prepare for it with the fight-or-flight response, when we think mindfully, we eliminate the possibility of stress turning on in the first place.

Focusing entirely on the present moment is depicted in the Zen story of a monk who was being chased by two tigers. He came to the edge of a cliff. He looked back, and the tigers were almost upon him. Noticing a vine leading over the cliff, he quickly crawled over the edge and began to let himself down by the vine. Then, as he checked below, he saw two tigers waiting for him at the bottom of the cliff. He looked up and observed that two mice were gnawing away at the vine. Just then he saw a beautiful strawberry within arm's reach. He picked it and enjoyed the best-tasting strawberry in his whole life.[12]

7.10 A Simple Mindful Exercise

This exercise invites you to experience how it feels to be mindful as it has been described in this chapter. Follow Stress Management Activity 7.1 at the end of the chapter to guide you in completing this activity. Take about 45 minutes to an hour to do this. *You are not to speak to anyone during this exercise!* You can do it either sitting or walking around, but make sure that you are entirely by yourself, with paper and pen in hand. Anywhere you find yourself can work to practice this exercise successfully. The process is the same, regardless of your location.

During this time, focus entirely on noticing, observing, and sensing what is (reality). You do this by saying to yourself repeatedly, "I am noticing . . ." or "I am aware of . . ." or "I am sensing . . ." Finish each statement by describing whatever shows up in your present-moment experience.

Tune in both to your senses and your internal activity (your thoughts as well as physiological and other internal activity) and discover whatever is presented to you. Notice the unfolding of everything before you. Use all your senses to experience mindfully what always has been around you, but you may have never really noticed. Don't look for anything—just observe. Move your attention back and forth from what your senses present to you to what is happening in your internal environment.

Externally notice everything you see, hear, touch, smell, and even taste. It might help to repeatedly ask, "What do I see *now*?" "What do I hear *now*?" "What do I smell *now*?"

STRESS STORIES

This Moment Is All You Have!

Many people come to me wondering why they are so stressed. When I give them this exercise to do for 45 minutes, they dismiss it as something silly and stupid. They think they should be doing something more worthwhile, something more substantial.

My response is usually something like this:

"If you want to enjoy inner peace, you must accept, even embrace, what is happening here and now. And the only way to experience the present moment is to stop analyzing, stop judging, stop trying to figure everything out, and just look. Stop and observe. Notice. *To be fully present in this moment brings peace. To be out of this moment, thinking we are somewhere else, doing something else is precisely why we feel so much stress.* To say this is a silly exercise is to say life is silly. Look at your experience. There is never a time when it is not this moment, right here, right now.

"All of life consists of successive moments of the present. We always can choose what we want to see in this moment. To choose to be mindful instead of mindless is wisdom of the highest order. In my mind, it is one of the grand keys to becoming peaceful, contented, and stress-free. But it must be practiced. So practice, for the rest of your life, because that is all you have—this moment."

—MO

"What do I notice about the taste of what's *now* in my mouth?" "What information does my sense of touch bring to me *now*?" (This sense of touch includes every part of your body.)

Internally, observe things such as your breath and your heart beating. Notice how gravity keeps you where you are. Notice your ability to remain balanced as you move. Tune in to any feelings of physical pain or discomfort, and notice these feelings as a detached observer. Internally, you also can focus on the flowing of your thoughts as they come and go (thought-watching). Observe if these thoughts consist of memories, thoughts of the future (plans), or judgments or criticisms about anything. If you notice yourself criticizing or becoming judgmental of the exercise, merely treat those thoughts as you would everything else that you observe.

Your single function during this time is to explore, watch, and observe. If you have ever just sat and watched a sunset or a sunrise and done nothing more than observing it happen, that gives you a hint of how this process feels.

On your paper, write down everything you notice. Use as many pages as you need. If you begin to get bored or feel yourself resisting the process, stop and just be present with what is, notice what shows up, and then continue writing what you experience. After this activity, complete the questions found in Stress Management Activity 7.1.

7.11 Inner Mindfulness Meditation

Inner mindfulness meditation, also called thought-watching, focuses the mind internally rather than externally through the five senses. It differs from other forms of meditation, which suggest that thoughts and images be developed and created to either relax or create positive images (discussed in Chapters 20 and 21). Thought-watching encourages nonjudgmental observation of thoughts and images for heightened awareness. One's awareness is not limited to any one focal point but, instead, can view one's thoughts as one would watch a movie going on inside one's mind, from the perspective of a detached observer.

A mindful meditation proceeds this way: With the eyes closed, take a moment to tune in to your thoughts. Allow yourself to nonjudgmentally watch your thoughts as they seem to come and go. As you keep your eyes closed, separate your awareness from the

TIME TIP

"I was first introduced to the idea of mindfulness in my stress-management class, and it became a major timesaver for me. One of our assignments was to try being mindful during some activity of our choice. I was feeling a lot of frustration and stress about the amount of time I spent studying for my algebra class. I was especially stressed because even though I spent lots of time studying for this class, I wasn't getting good grades on the tests. So, I decided to try it and be mindful while I studied.

"It helped that I went to the library and found a quiet study area. I started by closing my eyes and taking a couple of deep breaths. I focused on being present in the moment—right here, right now. I opened my book and concentrated on what I was reading. I even tried to picture the important formulas like they were on a movie screen and I was watching them. When thoughts about things other than algebra entered my mind—and they did—I noted the thought and then returned my focus to algebra.

"After lots of practice, this has gotten easier. One of the things I learned as I think back is that even though I was spending much more time studying before I used mindful studying, I wasn't really paying attention. I would study at home, often with my music playing, and with constant interruptions. I would get so frustrated. I now do more in a couple of hours of mindful studying than what used to take me most of a day. I feel much less stressed because I feel like the time I spend studying really matters. Plus, I'm doing better in school and have more time to do other things I want to do."

—David W.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

many thoughts that pop in and then leave your mind. Watch how some thoughts come into your awareness from nowhere, and then watch them expand and develop and lead to other thoughts. Watch these thoughts fade away as others replace them. See if you can differentiate thoughts that come and go. Notice that some thoughts focus on the past while others focus on the future. Watch for those thoughts that make judgments about or are critical of anything.

Continue to watch your thoughts passively as if you were pulling up a chair and sitting next to your thoughts. If you notice judgmental thoughts about this process, quietly observe those thoughts you have as well. If your mind wanders and you lose your focus, gently bring it back. Practice this inner awareness of watching your thoughts for as long as you feel comfortable doing it. Start with 5 minutes, then increase it for as long as 20 minutes. When you finish, take a little time to return to ordinary awareness.

7.12 Ways to Practice Being More Mindful

The following are some suggestions that you may use in your quest to become more mindful.

- Choose an activity that you do in a less than mindful way and focus on involving yourself entirely in the experience. For example, practice eating mindfully. Absorb yourself in the sensations that are part of eating. Take in the smells, the tastes, the colors, and the textures of the food. Spend time with each bite enjoying chewing—combining saliva with the food, feeling the food as it is transformed from large pieces to tiny sizes as you chew, feeling your food travel from your mouth to your stomach.

  There are other opportunities to practice being fully present in the here and now. You may try everyday activities such as taking a shower, driving, hiking, talking to a friend or a family member, or spending time in nature. Compare your experience of being mindful with how you usually operate in these everyday experiences, and see if there is any difference in how you feel and how you relate to the things in your experience.
- Pay attention to things that are happening around you. Rather than thinking about so many things, try merely observing all that shows up for you in your experience. Just watch, without concern for how you think things ought to be. Observe how things *are.* Do this with all your senses. Notice all the sounds, the different sights, the textures to touch and feel, and the varieties of smells. Be careful to avoid making judgments of what unfolds before you.
- Consciously speak to yourself, saying something like: "In this moment I allow myself to be here now. I cannot be anywhere else right now, nor can I be in my past or future, so I choose to relax and enjoy what is happening, here and now."
- If you find yourself in a setting that is mundane or always the same, take time to rearrange things. For example, change the layout of your bedroom or other rooms in your house. Changing your scene from time to time allows you to see things differently and therefore become more interested and observant of them.
- Take "mindfulness breaks" in which you do nothing but engage yourself mindfully. Nature is an excellent place to practice mindfulness breaks, because it offers so much to tune into and experience. The variety, along with the slower pace of nature, adds to our sense of enjoying the moment more fully. Try an "emotional walk-about" in which you walk without caring where you are going and with no purpose in mind other than to be present in the moment.
- Try a new sport or hobby. Engage yourself in learning a new skill.

? WHAT ELSE CAN I DO?

Regularly Have Fun

When we do something we highly enjoy, our minds usually leave the threat thoughts behind. When we do our favorite activities, we are more mindful and focused on the present moment. This focus promotes relaxation.

In our hectic days, we often forget to include time for things that bring us the most joy. We tend to downgrade those activities because they aren't urgent-action items. Much of the tension we build up at home, at school, or at the office can be released by doing a pleasurable activity away from the stressful environment.

Each of us has activities we would classify as hobbies. Our minds turn to the action, and we are absorbed in it. Some hobbies require a certain amount of tension, such as mountain biking, river rafting, and rock climbing. But this is eustress, rather than distress. Other hobbies, such as crafts, art, and most sports, allow for mindful experiences.

- Change your regular routines slightly. Go to school a different way than you usually do. Bike rather than walk to a nearby destination. Shop at a different supermarket or drugstore. Eat at a restaurant where you have never been before. Each time you experience these out-of-the-ordinary occasions, you open yourself up to new and exciting ways of experiencing life.
- When you engage in or notice others engaging in situations with heightened emotion, step back and just become an observer, rather than becoming emotionally involved in the incident. Become passive, watching what is happening rather than diving in and getting worked up. As you do this, notice that you are much more able to solve problems calmly, instead of creating more significant problems by adding to the drama.

Yuri Arcurs/Shutterstock.com

Even something as mundane as eating can be a fulfilling experience when you do it mindfully.

7.13 Planning for the Future

Mindfulness does *not* mean living with reckless abandon *for the moment.* It means living fully *in the moment.* A discussion on living in the moment and mindfulness often raises questions such as: "What are we to do about planning, setting goals, and creating our future?" and "Where does that fall into this discussion on mindfulness?"

Living mindfully does not mean that you ignore planning for the future or setting goals for what you want to do. Planning and creating goals involves bringing future moments into the present so you can apply appropriate control toward achieving them. This is a visionary process that constructively focuses on the future in this present moment. It is worthwhile and necessary.

On the other hand, worrying about a future event and directing our attention to its potentially painful outcomes is not productive. Planning involves arranging future events in the way that we prefer. When we plan something, we use our imagination constructively to create a future reality. When we worry about something, we use our imagination destructively. Worry happens when we think of a future event, and then, while that image is on our mind, we also add to the image some pain or discomfort that we believe will happen to us as part of that future event. We make up these stories and tend to spend our present moments dwelling on them. It is not a particularly useful way to spend our present moments.

One of the leading social fears in our culture is speaking in front of a group of people. When we *plan* for that event, we carefully pin down all the things we will say and how we will say them. When we worry about the upcoming speech, we imagine all the mental spears the people in the audience will throw at us while we are speaking. The difference between worrying and planning is treated more fully in the next chapter.

> Let him who would enjoy a good future waste none of his present.
>
> *—Roger Babson*

7.14 Putting It All Together

Although we are not likely to be fully mindful every minute of every day, we can have more moments of mindfulness. Start with one activity in your day—going for a walk, taking a shower, eating lunch, or even studying. Deliberately concentrate on being mindful for that time. Savor the present moment as fully as possible.

When we step back and observe our thoughts and feelings, as well as the external environment around us, we gain a new perspective. Mindfulness teaches us to see things as they really are, not the way we think they should be. With practice, mindfulness soon becomes a peaceful, happy way of living.

> Finish each day and be done with it. You have done what you could do; some blunders and absurdities have crept in; forget them as soon as you can. Tomorrow is a new day; you shall begin it serenely and with too high a spirit to be encumbered with your old nonsense.
>
> *—Ralph Waldo Emerson*

7.15 Conclusion

Mindfulness—the ability to enjoy the present moment—is essential for successful stress management. Learning to practice mindfulness has the potential to reduce one's perception of stress, enhance one's ability to maintain nonjudgmental awareness in stressful situations, and produce increased levels of positive states of mind.

To be at peace with yourself, learn to replace thoughts that produce unhealthy emotions such as guilt, worry, fear, and anger, with a mental focus on the present. Mindfulness combines an internal focus with attention to the outer world. Each day offers thousands of moments to let go and focus directly on the here and now. Benefits result when we learn to separate thoughts and emotions of everyday life from the essence of who we are. As our awareness increases, emotional states lose their power and ability to cause stress. In the words of Thich Nhat Hanh, "Be part of the miraculous moment."

ACTIVITY

7.1 Full Mindfulness Activity

Purpose The purpose of this activity is to allow you to experience mindfulness using your ability to observe with all your senses.

Description of Activity Psychologists tell us that we usually take in only about 1% of all of the stimuli that is available to us in any given moment. The primary reason for this is that we aren't paying attention. Our thoughts are always on other things, other places, and other times than here and now. This activity helps us tune in to the additional 99% of the stimuli that our senses usually miss. Focusing on the present moment has a profound impact on stress.

Directions During this activity, you are to go somewhere **entirely by yourself**. You will *not* talk to anyone. *No speaking allowed!* For about an hour, do nothing but observe. This activity can be done virtually anywhere, but somewhere outdoors may be more appealing. You will also leave your phone behind. You will need a notepad and a pen.

> At the top of your page, write "I AM NOTICING . . . ." Then, for an hour, complete the sentence over and over based on what your senses reveal to you. Begin each moment with the simple statement, "I am noticing . . ." as you discover all the things that present themselves to you. Use all your senses to experience what has always been here and now but you have missed because your thoughts were focused on some other time and some other place. Don't look *for* anything—just look. Write down the things that you observe with each of your senses. If you find yourself getting bored or resisting the process, stop, look, notice what shows up, and then continue.

Next, summarize your experience by responding to the following:

1. What setting did you select for your mindfulness activity? Why?
2. What were some of the main things that you observed, especially things you wouldn't usually notice?
3. What did you notice about your thoughts?
4. What did you notice about your feelings?
5. What insights did you gain about yourself and mindfulness as you were practicing being mindful?
6. What did you notice about your stress levels as you immersed yourself fully in your experience?

Key Points

- Mindfulness is the process of cultivating an appreciation for the fullness of each moment we are alive. It is a present-moment awareness.
- Mindlessness occurs when our thoughts are not in the present moment. We ignore the present moment because our attention is directed elsewhere.
- Mindfulness is a tool to unclutter the mind and bring about mental tranquility.
- Detached observation means staying in an observational state of mind without judgment or expectations.
- Mindful awareness is not limited to any one focal point, as is common in many types of meditation, but rather encompasses mind, body, environment, and whatever arises in the field of awareness.
- Mindfulness does not mean living with reckless abandon *for the moment.* It means living fully *in the moment.*

Key Terms

reality
unreality
mindfulness
vipassana
mindlessness
detached observation
sensory overload
mindfulness-based stress reduction

References

1. *Tao: The Watercourse Way,* by A. Watts (New York: Pantheon Books, 1975).
2. *The Presence Process: A Journey Into Present Moment Awareness,* by M. Brown (Vancouver, Canada: Namaste Publishing, 2010).
3. "When Science Meets Mindfulness," by A. Powell, *The Harvard Gazette,* (April 9, 2018).
4. *Mindfulness for Beginners: Reclaiming the Present Moment and Your Life*, by J. Kabat-Zinn (Boulder, CO: Sounds True, 2012).
5. "Mindfulness: A Proposed Operational Definition," by S. Bishop, M. Lau, S. Shapiro, et al., *Clinical Psychology: Science and Practice, 11*(3) (2004): 230–241.
6. "Does Mindfulness Meditation Increase Empathy? An Experiment," by E. I. de Bruin, E. Brummelman & S. M. Bogels, *Self and Identity, 16*(3) (2017): 251–269.
7. "Mindfulness and Healing Intention: Concepts, Practice, and Research Evaluation," by S. Schmidt, *Journal of Alternative and Complementary Medicine, 10*(Suppl. 1) (2004): 7–14.
8. "Choose Joy," by M. Maisey-Ireland, *Black Hills Art Anchor*, September 2003, p. 12.
9. *Love Is Letting Go of Fear*, by G. Jampolsky (Berkeley, CA: Celestial Arts, 1979).
10. *Winning through Enlightenment*, by R. Smothermon (San Francisco: Context Publications, 1980).
11. *The Miracle of Mindfulness: A Manual on Meditation,* by T. N. Hanh (Boston: Beacon Press Books, 1976).
12. *Handbook to Higher Consciousness,* by K. Keyes (Coos Bay, OR: Living Love Center, 1985).
13. "The Association between Sensory Processing Styles and Mindfulness," by K. R. Hebert, *British Journal of Occupational Therapy 79*(9): 557–564.
14. "Awakening to the Dharma," by J. Goldstein, in B. Shield & R. Carlson, *For the Love of God* (San Rafael, CA: New World Library, 1990).
15. *Zen and the Art of Motorcycle Maintenance*, by R. Pirsig (New York: Bantam Books, 1974).
16. *The Inner Game of Tennis*, by W. T. Gallway (New York: Random House, 1974).
17. *Mosby's Complementary and Alternative Medicine: A Research-Based Approach* (3rd ed.), by L. Freeman (St. Louis, MO: Mosby, 2009).
18. "Mindfulness-Based Stress Reduction as a Stress Management Intervention for Healthy Individuals: A Systematic Review," by M. Sharma & S. E. Rush, *Journal of Evidence-Based Complementary & Alternative Medicine, 19*(4) (2014): 271–286.
19. "Effects of Mindfulness-Based Stress Reduction on Employees' Mental Health: A Systematic Review," by M. Janssen, Y. Heerkens, W. Kuijer, B. et al, *PLoS One, 13*(1) (2018).
20. *Mind/Body Health* (5th ed.), by K. Karren, N. Lee Smith, & K. Gordon (Glenview, IL: Pearson Education, Inc., 2014)

chapter

8

Managing Emotions

Am I correct to think I can put an end to negative emotions such as fear and anger?

I have always wanted to go on a study abroad program for a semester, but I'm afraid I might not be able to handle being so far from home. I feel like I'm missing out. What can I do to overcome my fear?

My grandma is a worrier, my mother is a worrier, and I'm a worrier. Is worrying a result of heredity or environment?

Sometimes I get so angry I think I'll explode. What can I do to control my anger?

Greg Epperson/Shutterstock.com

> If you think the problem is outside of you, that thought is the problem.
>
> —*Stephen covey*

Learning Objectives

Study of this chapter will enable you to do the following:

8.1 Explain how negative emotions such as guilt, worry, fear, anger, and hostility relate to stress.

8.2 Describe the physiological manifestations of certain emotions.

8.3 Distinguish between guilt and worry.

8.4 Explain the differences between anger and hostility.

8.5 Act to prevent and control stress-causing emotions.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

Real People, Real Stories

Fear factor Dr. Lyn Freeman relates this story about fear:

Theresa was rock climbing in an area indigenous to rattlesnakes. Upon reaching an especially precarious part of the climb, with only one good handhold left, she was tired. With as much force as possible, Theresa jammed her fingers into the rock crevice and prepared to swing herself up to the top. At that moment she heard a rattling sound. In an instant, she was gripped with fear.

In a split second, the thought of being snake-bitten several times, the fear of pain, a picture of her hand swelling, and the fear of an agonizing death all raced through Theresa's mind and body. Her heart began to pound, and she began to pant and sweat profusely. Her body stiffened as her gaze froze on a shadow in the crevice. Her thoughts focused like a laser on her predicament.

"Don't let go!" a voice screamed in her head. She thought she might survive a snake bite, but never a 2,000-foot fall. With all her will, Theresa strengthened her finger grip on the crevice and, with tremendous effort, swung herself to the top of the bluff. She ripped off her climbing gloves and checked for signs of a bite. Her hand was perfect. Safe, her bodily responses slowly began to return to a healthier state.

A few minutes later, the climber just behind Theresa pulled himself onto the bluff. "Did you encounter the rattler?" Theresa asked.

"Oh, do you mean this?" the climber responded. He reached into his shirt and pulled out a chain with snake rattles attached to the end. Shaking the rattles, he said, "This is my good-luck charm."

Source: *Mosby's Complementary and Alternative Medicine: A Research-Based Approach* (3rd ed.), by L. Freeman (St. Louis: Mosby, 2009).

8.1 Managing Emotions

Do you control your emotions, or do your emotions control you? The ability to experience a wide range of emotions is part of what makes us uniquely human and keeps life interesting. We get angry. We get scared. We feel guilt and worry. How boring life would be if we never got to experience the ups and downs of emotions! Like most things in life, we need a healthy balance for optimal well-being. Chronic guilt and worry, fear that prevents us from living life fully, a tendency toward anger and hostility—all are stressful, potentially detrimental to our health, and can profoundly affect our quality of life. You will learn in this chapter how emotions happen and how to gain control of your emotions, so they don't control you. The focus is on the emotional dimension of health.

As Theresa's story shows, strong emotions may or may not be based on reality, but the strong physiologic response to fear is the same whether the rattlesnake is real or imagined. To think that we can end all negative emotions is unrealistic. The key to better health and a happier life lies not in which emotions seize us but, instead, in our ability to express and control our emotions.

cheapbooks/Shutterstock.com

Experiencing a range of emotions is part of the human experience.

8.2 The Physiology of Emotion

Theresa's momentary experience had a profound physiological and biochemical effect on her. Will this intense, one-time scare adversely impact Theresa's health? Probably not. Emotions can be used for protection. Feelings of fear and anger are linked to the fight-or-flight response, so they help protect us. Fear relates to "flight," when running from or escaping from a potentially dangerous situation can protect us. Anger relates to "fight," in which the stress response helps confront and battle something we think is threatening.

Researchers have discovered that some emotions can make us more vulnerable to stress and disease. Worry, guilt, fear, anger, shame, and other strong emotions activate the stress response—as we saw in Theresa's story. Fear put Theresa's body on alert. Important hormones, including cortisol and epinephrine, flooded her body. Her blood pressure soared and her heart raced. Because the feeling quickly came to an end, she won't notice any lasting effects.

The problem comes when emotions like fear and anger are frequent or constant. Chronic negative emotions affect our well-being the same way that long-term stress affects our health. Emotional stress increases our vulnerability to disease by disrupting

mangostock/Shutterstock.com

Positive emotions like joy and happiness can reduce stress levels.

normal homeostasis—the systems of the body get out of balance. **Somaticizing** is the body's way of turning mental stress, usually anxiety, into a physical issue. Chronic worry and anxiety can overwork the nervous, immune, and hormone systems. When people somatize an emotion like worry into a physical complaint, they literally feel a physical impact.[1]

A growing body of research suggests that as many as half of all patients who visit physicians have physical symptoms directly caused by emotions. Some research puts that figure as high as 90 to 95%. These are real physical symptoms, not imaginary. This tells us that the root of many of today's illnesses and diseases is mental and emotional rather than organically physical.[2]

When worry, fear, or anger become typical psychological responses to life, health deteriorates and life loses some of its joy. Learning how to manage the primary stress emotions can prevent that from happening.

> It isn't the experience of today that drives men mad. It is the remorse for something that happened yesterday, and the dread of what tomorrow may disclose.
>
> —*Robert Jones Burdette*

The Benefits of Positive Emotions

The focus of this chapter is on managing emotions that contribute to unhealthy stress. But what about feelings that positively impact our health? Throughout this book, you are introduced to the benefits of emotions like happiness, compassion, and optimism. So, while this chapter covers stress-related emotions, be alert to positive emotions that can make your life better. See the Positive Nuns Stress Study to learn how positive emotions can even contribute to longevity.

8.3 Guilt and Worry

> You wouldn't worry so much about what other people think if you realized how seldom they do.
>
> —*Eleanor Roosevelt*

Guilt is a conscious preoccupation with undesirable past thoughts, feelings, or behaviors. Guilt is an expression of self-anger that includes internal dialogue that sounds like, "I should have . . ." or "If only . . ." Guilt can lead to higher stress levels, lowered self-esteem, and ultimately, anxiety and depression.[3]

While guilt keeps the mind occupied with thoughts and behaviors from the past, **worry** keeps the mind negatively focused on events yet to come. When we worry about something, we focus on negative outcomes that we feel will be uncertain.[4] When worry and **anxiety** escalate, the outcome is fear. Worry, anxiety, and fear are similar feelings that involve dwelling on an expected future and an apprehension for what that future might bring.

STRESS STUDIES

Positive Nuns

The Nun Study provides evidence of the importance of maintaining positive emotions. A group of 180 nuns wrote autobiographies while they were in their early 20s. The diaries were analyzed many years later and assessed for common psychological features. The researchers also looked at the number of these nuns who lived to the age of 75 to 95. The results showed that "Positive emotional content in early-life autobiographies was strongly associated with longevity six decades later." Nuns who expressed the most positive emotion in their diaries lived on average 10 years longer than the others.

Source: *"Positive Emotions in Early Life and Longevity: Findings from the Nun Study," by D. D. Danner, D. A. Snowdon, & W. V. Friesen, Journal of Personality and Social Psychology, 80(5) (2001): 804–813.*

Letting Go of Worry

When you watch young children, you become aware that they rarely feel guilt or worry. These are habits we develop. Imagine how silly it would sound if one youngster were to say to another, "I'm so worried about coming to your house later today. We might get hurt, or your mom will yell at us, or we may disagree about how to do a front flip on your trampoline."

Kids don't let thoughts of what may or may not happen dominate their awareness. They are too busy attending to what is happening right now, enjoying their present-moment activities to use up their consciousness on some unlikely future event. Children can teach a lesson about worry that many adults need to learn.

Guidelines to Help You Manage Worry

The following 7 ideas can help you when you feel the urge to worry.

1. *Most things we worry about are out of our control.* Even if we can change some aspect of the things we worry about, worrying is not the way to do it. We worry about war, the economy, the

possibility of coming down with some illness, about losing our job; we worry about whether someone likes us; we worry about the people we love; we worry about our weight; we worry about whether we will get a good grade in a class. We worry about getting old and dying. The list of the things we worry about is endless. Very few of these things can we directly influence.

2. *Worry is different from caring.* We have no control over most of the things we worry about, but we have been taught, and accept as correct, the notion that worrying is the same as caring. This is a learned belief. We are not born worriers, but we may have been taught at an early age that if we care about someone, that means we should worry about them. We believe that if we don't worry, we must not care very much.

FYI

Sources of Worry

Surveys show that the most common sources of worry for Americans are family and relationships, job or school, health, and finances. Studies show that most people worry about 5% of the time. Chronic worriers, however, spend an average of about 50% of their time worrying. And some worry nearly 100% of the time.

Source: *Mind/Body Health (5th ed.), by K. Karren, N. Lee Smith, & K. Gordon (Glenview, IL: Pearson, 2014).*

Tip: Take time to reflect on the idea that worrying is not productive. Think of someone you worry about. Make a list of alternative ways you can show caring toward that person in productive ways. For example, if you are worried about your mother's health, take a few minutes, rather than wasting time worrying, to write her a note expressing your love and appreciation for her.

> We worry and we worry . . .
> and we worry about worrying.
>
> —*Leo Buscaglia*

3. *Worry is not the same thing as planning.* When we worry, we think of a future event and all the bad things that might go wrong as part of that event. And then we dwell on those bad things. When we plan, we bring future moments into the present so that we can control those future events properly. When we plan, we use our present moments in a useful way to prepare us for a future event or experience. It is essential to distinguish the difference between worrying about the future (un-productive and stress-producing) and planning for the future (productive and stress-relieving).
4. *Most things we worry about never happen.* When we worry, we focus on potentially painful outcomes that we associate with a future event. We let our present moment be filled with what might happen but usually doesn't. If you were to analyze it accurately, you would find that in most cases, the things you worried about didn't happen. Mark Twain understood this when he said, "I am an old man and have known a great many troubles, but most of them never happened."
5. *Practice mindfulness.* An effective way to remain free from both guilt and worry is to practice being mindful, as explained in Chapter 7. Mindfulness keeps our attention on what is happening here and now. When our thoughts are focused on here and now, we aren't as likely to dwell on the past and its associated guilt, or on the future and its associated worry and fear.
6. *Move your worries from your mind to paper.* Idle worrying is not constructive. The next time you catch yourself worrying, write down what is troubling you. Once you have transferred the worry from your mind to the paper, you can identify the concern more clearly and find a solution. You might even try making a list of everything you worry about for one day. Go back and review the list in a week. You might be surprised to see how few of your worries are valid.
7. *Remember—worry is a habit.* Negative habits such as worrying are learned, and they can be unlearned or replaced with healthy, positive habits. When you become aware that you are worrying, say to yourself, "Worry is a habit, and I choose to break this habit." Focus your mind on a relaxing image or a stress-relieving affirmation.

Tip: If worry is a habit you can't seem to break, give yourself appointed "worry time." It sounds crazy, but by limiting your worry time, you can prevent worry from consuming your thoughts.

TIME TIP

"I used to waste a lot of time worrying. When I worried, I felt like I was doing something. I felt like I was preventing some predicted catastrophe, like failing a test or my dad getting cancer. After I read the chapter on managing emotions, I had an 'A-ha' moment. I was wasting a lot of time and energy worrying. It was like I was living the failure or catastrophe, even though it may never happen. Now, at the first moment I become aware that I am worrying, I stop and ask myself this question, 'Will my worrying about this change the outcome?' This simple strategy has saved me hours of needless worry (and stress) so I can focus my time and energy more productively."

—Cindy E.

Reducing Test Anxiety

What do you worry about? Students often explain that they worry about such things as money, family concerns, grades, relationships, and their future. But by far, at the top of the list, students

STRESS STORIES

Worry Turned to Panic

In graduate school, I had a good friend whose wife allowed worry to take pointless control of her life. For example, while she was driving home from the store, she would have thoughts like these:

"I wonder how things are going at home . . . The babysitter is a good one . . . she seems to take such good care of our kids . . . But I wonder if she's okay right now . . . I wonder if the kids are okay right now . . . Sometimes the babysitter isn't completely responsible . . . I'll bet she's taken the kids to play in the park . . . She's probably taken the kids for a walk and left them alone. That irresponsible babysitter has left the kids on their own, and they don't know how to get back home! . . . My kids are in danger! . . . Somebody is going to kidnap them! . . . The kidnapper is going to hurt my kids! . . . Things can't possibly get any worse than this!"

At this point, this good mom was having a panic attack. Her hands were clutching the steering wheel, her heartbeat was soaring, her blood pressure was through the roof, and her thoughts raced madly through all the horrible things that surely were happening to her kids. She drove home, barely able to control herself as she panicked about her kids. She had driven herself to a frenzy.

Of course, when she arrived home, the kids were fine. They were happily playing with the babysitter and enjoying a pleasant afternoon in the backyard.

This loving mother allowed her thoughts to control her consciousness to the point where she was damaging her physical and emotional well-being. Her body was flooded with stress hormones, resulting in a full-blown stress response—which she would need if her kids really were in danger.

Notice how unnecessary her worrying was. While she drove home, she could do nothing about what was happening with her kids and the babysitter. Her worrisome thoughts were immobilizing her and preventing her from enjoying her ride home.

—MO

STRESS STUDIES

Worry and the Mind

Stress emotions can affect our cognitive abilities. When we are overcome with emotions, we have trouble thinking clearly, and long-term worrying can produce lasting decline. In a study reported in *Neurology,* chronic worrying was linked to an increased risk of mental decline. Comparing worriers with non-worriers, based on an initial assessment, 1,064 members of a community were observed 3 to 6 years later for Alzheimer's disease. The results showed that obsessive worriers had more than double the risk of decline compared to their more carefree peers.

Source: *"Proneness to Psychological Distress and Risk of Alzheimer Disease in a Biracial Community," by R. S. Wilson, L. L. Barnes, & D. A. Bennett, et al.* Neurology, *64 (2005), 380–382.*

report that they worry about tests. Have they studied enough? Did they review the right information? How can they relax so they can think clearly and remember what they studied? How did they do? Because tests carry a lot of weight toward successful graduation, doing poorly is often seen as a significant threat to that success.

The least useful thing we can do, to do well on a test, is to worry about it. Recall from Chapter 3 that any time we are in the stress mode, our higher-order thinking tends to shut down. In other words, our ability to remember, process, and analyze crucial cognitive information is reduced dramatically when the stress response is activated—as stress rises, intellectual ability declines.

Here are 11 tips to help reduce your test-taking worries:

- *Prepare*—This may seem obvious, but preparing means more than cramming information into your brain the night before the test. Rather than wasting time worrying about when you will study for a test, make a schedule that spreads your studying out over several

STRESS BUSTING BEHAVIOR

No More Worrywart

Review the following 7 helpful ideas when you feel the urge to worry. Prioritize these ideas from the most helpful for you (1) to the least helpful (7). This week, each time you feel the urge to worry, focus on your number 1 idea to reduce or end this negative emotion.

○ Most things we worry about are out of our control.
○ Worry is different from caring.
○ Worry is different from planning.
○ Most worries never happen.
○ Move your worries from your mind to paper.
○ Practice mindfulness.
○ Remember, worrying is a habit.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

days before the test. Research on test preparation suggests that we can remember more if we study the information on several occasions (paced learning).

- *Descriptive writing*—Take about 10 minutes immediately before taking a test to record your thoughts and feelings. Researchers found that college students' test scores significantly improved when they practiced this expressive writing intervention. Writing about their worries had the effect of offloading them onto the page, so that the students had more cognitive horsepower available to apply to solve the problems on the test.
- *Ask*—If you are unsure of what to study for an exam, rather than wasting time worrying if you are considering the right information, make an appointment with your professor and ask for guidance.
- *Sleep on it*—Review the material the day before the test, then get a good night's sleep. When you are drowsy, your ability to recall essential information decreases. Getting enough sleep is vital to optimum mental functioning.
- *Eat well*—Evidence suggests that protein is brain food. In other words, if you want to think more clearly, before the exam eat primarily protein-rich foods. Avoid eating a large meal right before a test, especially a large meal rich in carbohydrates and bad fats. You want your blood flowing to your brain, not your stomach.
- *Exercise*—Try a brisk walk around the block, or sprint up and down the stairs before taking a test. Exercise is a beautiful way to get your blood pumping to your brain and to get rid of the accumulated stress.
- *Try a relaxation technique*—Do something that profoundly takes you out of the stress response. The relaxation techniques described in Chapters 16 through 22 of this book are some of the best-known ways to make that happen. When the mind and body are deeply relaxed—that is, not in the fight or flight mode—the mind is in an optimum state to remember what it has thought about previously. Relaxation breathing is an easy and effective technique to reduce test stress, but pick your favorite—autogenics, meditation, guided imagery, or yoga—you decide. Just sit back and enjoy the relaxation. A profoundly relaxed mind is a clear-thinking mind.
- *Practice mindfulness*—Remember what you learned in Chapter 7: Keep your mind focused entirely on the question at hand. If the answer to a problem doesn't immediately come to you, stay focused on the here and now. Don't let your mind bring up thoughts of what might happen because you don't know the answer—don't dwell on the adverse outcomes. Doing so will activate the stress response.
- *Move on*—If you don't know an answer, calmly move on to the next question. Let the earlier question return to your subconscious mind, which will be searching for the answer. Later, come back to the problem and watch for the answer to pop into your mind. If you still don't know the answer, give it your best guess. Don't let your mind make up stories of adverse outcomes. Don't envision worst-case scenarios of how terrible things will be if you don't get it right.
- *Know when enough is enough*—Yes, you could always study more, but at some point permit yourself to feel good. Follow these tips, pat yourself on the back, and tell yourself, "I am prepared, so I can relax and do my best."
- *Let it go*—A lot of worrying happens after the test is done. What is the point in agonizing about a missed question? Do your best, learn from your results, and move ahead.

> You gain strength, courage, and confidence by every experience in which you really stop to look fear in the face. You must do the things you think you cannot do.
>
> *—Eleanor Roosevelt*

During it all, keep perspective. As a student for many years, consider how many tests you have successfully taken. Getting an answer wrong is unlikely to result in devastating consequences. So, don't worry. Relax and enjoy your opportunity to work your mental muscles.

Letting Go of Guilt

Guilt can be a destroyer or a teacher. When we reflect on our actions, we can learn valuable lessons from them. Hindsight is a great teacher if we are willing to listen.

Several of the ideas discussed earlier for how to manage worry also work to handle guilt. For example, you can remember that guilt is a habit. When you feel guilty, you can replace those thoughts by thinking mindfully. To manage stress and enjoy life, remember that we

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

can learn from our past experiences, and we can plan for our future. Worry and guilt will not help unless we use those emotions to motivate us toward positive change.

8.4 Fear

What is fear, and what happens in our minds when we experience fear? When worry becomes intense, we call it fear. **Fear** is a state of escalated apprehension about a future event. We create mental stories that something in our future, some event or experience, is going to include pain, danger, or discomfort, and needs to be avoided. Fear is the feeling of wanting to avoid the pain, danger, or discomfort. Psychologists report that fear is one of the main reasons people seek their help.

Types of Fear

Common types of fear and examples of each are in Table 8.1. Fear can paralyze and disable us, and it can stop us from going after our desires. In succumbing to fear, we settle for less and get less than what we really want. As an example, you probably know of someone who wants to interview for a job, try out for the golf team, ask someone out on a date, or audition for a play, but because of that person's feelings of fear, he or she does not realize those desires. The belief that these activities may be painful in some way stops the person from moving forward toward the desired goal.

> He has not learned the lesson of life who does not every day surmount a fear.
>
> —*Ralph Waldo Emerson*

It's about Growing

To figure out fear, let's ask a philosophical-sounding question: *Why are you here?* We are not merely asking, "Why are you sitting where you are as you read this chapter?" The more profound questions are: *Why do you think you are alive on this planet right now? What is your purpose for being? What is the meaning of your life?* These might seem like strange questions to include in a chapter about fear and emotions, but you'll soon see why they are related. Some responses are:

- To learn everything I can
- To enjoy life to the fullest
- To make a difference in other people's lives
- To serve others
- To have and support a family and provide a quality life for my kids
- To develop my skills, talents, and natural abilities
- To have an enjoyable time
- To be happy
- To work toward and reach the goals that I set for myself

All these purposes are worthwhile and have immense value. When we look at them, we notice a common theme: the general tendency among humans to grow, to develop, to serve, and to enjoy. We have a natural urge to want to expand, to become more of who we are. Even people like the great physicist Albert Einstein, at the point of death, lamented the fact that so little of him had been realized. We have enormous untapped potential.

> Lean into your fears, dare them to do their worst and cut them down when they try. If you don't, they'll mushroom 'til they surround you, choke the road to the life you want. Every turn you fear is empty air dressed to look like jagged hell.
>
> —*Richard Bach*

TABLE 8.1 Types of Fear with Examples

Fear	Examples
Change	Afraid to move to a new city, change majors, or break up with a boyfriend or girlfriend
Pain or physical suffering	Fearful of going to the dentist or getting a shot
Failure	Afraid of not being selected for the track team or not being accepted into graduate school
Some *thing*	Afraid of snakes or spiders, or being mugged
The unknown	Fearful of going away to school or of people who are different from you
Death	The biggest unknown of all

Comfort and Discomfort Zones

In contrast to our innate need to grow and expand is a natural law of behavior: *We tend to gravitate toward our comfort zones*. A **comfort zone** is any place, situation, relationship, or experience where we don't feel threatened—where we don't feel any pain. It is usually a familiar place or situation where we feel safe and in control. Examples of comfort zones are our homes, especially individual rooms or areas in our homes, our jobs, the family and friends we enjoy being with, the types of food we eat, the places we go to exercise, the make of car we drive, the routes we commonly travel. Generally, we prefer being in safe situations, being around friendly people, and doing comfortable things.

When we are in our comfort zone, however, we experience little growth or progress. To grow, we must leave our comfort zone and move out into our **discomfort zone.** The word *discomfort* implies that we do not feel comfortable "out there." Discomfort zones are places where we *do not* naturally gravitate. We usually try our best to avoid discomfort zones.

Although moving out of a comfort zone can help us progress in the direction of our potential, it has a catch: This growth takes effort. This effort usually involves overcoming or dealing with fear. Let's look more closely at what's really happening with fear.

When we venture out of our comfort zones, we sense the emotion of fear because we believe that pain or discomfort might be lurking out there. But the reality is that *there is no pain in our discomfort zones*. When we move out into our discomfort zones, we seldom are hurt in the real sense where physical pain is involved.

On rare occasions, it can happen. Some people live in environments where physical danger can be a real threat. In these situations, fear can protect us.

In the vast majority of cases when we feel fear, however, we aren't going to experience any physical pain. We make up stories to prepare for pain that simply isn't going to happen. Consider the following example that looks at one of our top social fears—public speaking.

Imagine that you have been asked to speak in front of a large group of people. Because this is something you are not comfortable doing, you prepare for several days. As the time approaches for you to speak, you notice that you feel increasingly nervous. Finally, you find yourself at the meeting where you are the next speaker. You feel prepared, yet before being introduced, you notice that your knees are shaking, your mouth is dry, and you have trouble thinking clearly (all indications that you have activated the stress response). Your mind races with thoughts of what the people in the audience might think of you once you start speaking. You notice yourself sweating, feeling extremely uncomfortable. You almost want to cry or run away as your name is announced.

With some difficulty, you make your way to the podium. At first, it seems like you barely can get any words out, but soon you settle into a nice flow, and you end up giving your speech without any problems. The people in the audience are attentive, nodding, smiling, and even laughing at your jokes. At the end of the address, you notice that the crowd is applauding. You return to your seat with a smile on your face, relieved that you are finished.

Remember, fear is a feeling based on the thought that you want to avoid potential pain in the future. So, let's identify where any pain can be found in the sequence of giving your speech. If you felt fear at any point as you approached this speech, we must ask this crucial question: *Where* was the *real* pain during the speech? Going through each phase of giving the speech, where would we find pain?

No real pain happened while you sat in your seat, waiting to get up; nor did you encounter anything painful while you walked over to the podium. No real pain occurred while you gave your speech. Nor did any pain afflict you as you returned to your seat after you finished speaking. At no point during the entire event did *real* pain happen. If giving a speech is a pain-free experience, why would you feel any fear?

Your fear was based on your thoughts about the people in the audience. You made up stories about how you think the people might be thinking about you. You think they might disagree with you or think judgmental thoughts about you. Those thoughts are psychologically painful. That's where the pain is.

Remember that thoughts precede feelings. Your thought was that people's opinions mattered to you, and rejection hurts. The fear you felt is the emotion that follows the thought of wanting to avoid *that* pain. But there was nothing painful about the speech itself.

STRESS STORIES

Go for It!

I was eating dinner at a restaurant with two of my kids. My daughter told me she was thirsty and wanted another drink of water. I told her to go ahead and ask the waitress to bring her some water. My daughter's face went sour, and her eyes lowered. I could tell she had some reservations about asking for another glass of water. She was afraid of asking but had no idea why she was scared. I tried to help her understand that she could easily do this thing that she feared. I suggested to her that she not let her fears stop her from getting what she wanted.

Similarly, we see something that we want, but our thoughts of painful or uncomfortable outcomes keep us from going after it. As was the case with my daughter, most things we fear are based on empty ideas about what might happen to us but probably won't. In her case, there was no threat, and there would be no future pain. For most of the fears that we deal with daily, the same is true: The only real pain we will experience is the pain and discomfort that we create in our own heads.

—MO

You can do a test to show that this is how it works, that your fear is based entirely on your thoughts and not on the process of giving the speech: Do the same speech again in the same room, but this time do it without anyone present in the audience.

As with an audience, you are doing precisely the same thing—sitting, walking to the podium, speaking, and then sitting down again when you are done. Your experience this time will be far different than the first.

What can we do with this realization? Anytime we find ourselves afraid of something, we can mentally examine each step before the event, and the event itself, determine if any *real* pain is likely to happen, and then remove any *unreal* pain. By recognizing that there will be no real discomfort except that which we create in our minds, we can choose to think differently about it, as we have discussed. Once we have recognized that no real pain is involved, we are much more likely to move forward in the direction of our desire without fear or apprehension. We become free to move confidently toward any target that we choose.

8.5 Putting It Together

1. Most of us believe we are here not to be stuck in a rut of comfort but, instead, to grow and move in the direction of our potential.
2. Our natural inclination is to be comfortable—to remain in our comfort zone.
3. We need to balance our desire to feel comfortable with our inherent tendency to grow.
4. Overcoming fear is necessary for growth, and growth takes effort.
5. Most of the things we fear involve an imaginary pain we think we want to avoid.

We need courage to shift from comfort to discomfort. Moving out of our comfort zone implies facing our fears. But if we are to expand and grow, we must do so.

Fear Factors

The following four principles for managing fear can shape our understanding of fear and guide us in taking control of our choices.

1. *Fear can motivate decisive action.* If you are afraid of flunking a test, you can use that fear to start a plan of action. One student, Dave, related in class that he remembered the day he received his credit card bill in the mail and realized that he was scared. He felt absolute terror about the debt he had accumulated and feared he would not be able to get out of debt because of the choices he had made. Dave was able to use his fear to start a change. He sought financial advice and received help in setting up a budget. Dave used his fear to move him toward positive change.

   Fear also can serve a protective function in times of real physical danger, such as the fear of burning our hands when we touch a hot oven or the fear of being attacked if we walk alone at night. As a result, we don't touch the hot stove, and we don't walk alone at night.

STRESS STORIES

Facing Fear

In class, I ask students to think of something that they fear—not something that barely edges them outside their comfort zones, but something that will move them way "out there." The item they decide on must be something that they ought to do, something that would add real value to their lives, but they haven't done it because they were afraid. Then I ask them to take the next two weeks outside of class to completely do the thing they feared.

Each time I give this assignment, I am amazed at the breakthroughs, as well as the insights, of the students who choose to really "go for it." I often hear comments like these: "I can't believe I was afraid of something so silly." "I feel so alive and free ever since I did that." "What a relief to know that I can do that which I never thought I could or never tried because I was afraid." The final part of this assignment involves students moving to the next fear and going for that one as well.

—MO

2. *Nothing in the world is inherently fearful.* Like stress, there is nothing "out there" that universally causes fear. Fear is a subjective experience. Many people fear snakes, while others are content to have the critters as pets and feel no fear as the snake slithers around their neck. The snake doesn't cause fear. The fear is the result of what the person believes about the snake. When we associate a snake with pain and danger, fear is the result. The emotion of fear is the result of the stories we make up about the snake.
3. *Fear is learned.* Psychologists tell us that newborn babies have a natural fear of falling and loud noises. Others disagree, saying that babies are merely reacting to these stimuli without the ability to associate pain with an experience. Regardless, most of what we learn to fear is a result of either personal experience or our belief in someone else's experience. For example, if your neighbor tells you about the time she went to the dentist and experienced excruciating pain, you may decide to do everything in your power to avoid going to the dentist. When we experience something painful, such as getting stung by a bee, in the future, we will associate the experience of pain with the presence of a buzzing bee.

   If fears are learned, it follows that they can also be unlearned. It is possible to release our attachment to our fears, to let them go. If one person can overcome fear, such as a fear of high places, or speaking in front of a group, or meeting a new person, so can others.
4. With practice and experience, *we can learn to overcome our fears.* We get better at handling fear through training and experience. Gradually, we develop confidence and self-trust to risk more often and to do more things that seem frightening. We could talk about all the reasons we feel fear, but until we step out of our comfort zone, look that which we fear straight in the face, and move toward it, we will not rid ourselves of our fears.

Do you remember when you were learning to drive a car? Most of us were intimidated the first time we got behind the wheel. And why wouldn't we be? Driving a vehicle is a big responsibility, and one of the most potentially dangerous things we can do. Yet, we overcame our fear. Through practice and experience, we gained confidence. Our familiarity with this activity reduced our level of fear.

We can reinforce the feeling of assurance that we can handle whatever we need to reach our goal by looking at our past experiences. The fact that you are alive is proof that you are a capable person. This is not a frivolous statement. It is an accurate one. You know you can handle life's challenges because you have been handling things every day. Why would some future event be any different from the millions

Morozov67/Shutterstock.com

If fear is learned, it can be unlearned. Overcoming a fear, such as a fear of heights, can be exhilarating.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

The meaning I picked, the one that changed my life: Overcome fear, behold wonder.

—*Aeschylus (525–456 BC), Greek tragic dramatist*

of previous ones? Unquestionably, things seem uncertain at times, but you still come out alive, unhurt, and capable of handling more. As we do this, we find that not only do we achieve what we desire, but also enjoy the experience of going for something that seemed scary at first. The pain that we perceived rarely happens, but the joy of going for what we want often does.

Strategy for Overcoming Fear

The following is a proven strategy for overcoming fear:[5]

1. *First, admit you are afraid.* List the things that cause you to feel fear. As you think about these things, try to imagine them without the emotion of fear. Learn to disassociate the pain from the event. This takes some practice, but you can do it.
2. *Next, confront your fear.* Do whatever it is that you are so afraid of. Realize that your fear will intensify as you face it but do it anyway. Try to imagine that the situation is not fearful.
3. *Do whatever you are so afraid of at least three times.* Chances are that you will be less afraid each time. Chances are even better that you were afraid because you were unsure.
4. *As you confront your fear, call it something else*—excitement or a challenge, for example.

Fear knocked at the door. Faith answered. Nobody was there.

—*English Proverb*

Momentum carries tremendous power. If we settle for one little victory, the growth stops there. To continue the progress, plan another visit into your discomfort zone and venture out again. Little by little, you will realize that fear is an illusion. With practice, you can adopt the feeling of assurance that you can handle it.

The Fear–Faith Connection

One common thought that precedes the emotion of fear is a lack of trust in ourselves. We can alleviate the fear of failure with a sense of self-assurance and self-efficacy. The more we believe that our lives are about something, that things happen for a reason, and that we are meant to benefit from the experience of our journey, the more courageous and less fearful we are when we are confronted with scary situations. The more we are guided by fear, the weaker our faith. The stronger our faith, the less we fear. We are talking not only about a conviction related to the belief in a higher power, but also about the confidence you have in yourself and your abilities. Pushing through fear is less frightening than living with the underlying fear that comes with a feeling of helplessness. Underlying all our fear is a lack of trust in our ability to handle something. We need to remember that we *can* handle it.

You will never overcome all your fears, but you can conquer the fears that prevent you from living your life to the fullest. Set out to tackle the fears that hold you back. Viewing life as an adventure and an opportunity to grow can help reduce the fear of venturing into new, unknown territory. Helen Keller said, "Life is either a daring adventure or it is nothing." Have you ever given up on a hope, a dream, a goal, or an adventure because you were afraid of failing? Pushing ourselves out of our comfort zone can energize us and help make life an exhilarating experience. Some of life's most significant stress is a result of regret, of being afraid to stretch for fear of failure. Shakespeare once said, "A coward dies a thousand deaths, a hero only one." The coward lives potential outcomes repeatedly in his mind, continually bringing up the associated pain. The hero simply moves in the direction of the feared thing.

? WHAT ELSE CAN I DO?

Ask Questions

Don't let the fear of asking a question keep you from getting necessary and helpful information. Be sure you completely understand what you are told. Asking questions can help you get more directions or clarify what is being asked of you. If you feel afraid to ask for help, summon your nerve and go for it anyway!

As you move through your fears, celebrate your victories. The more you associate pleasure and positive feelings with risking, the more you will be inclined to risk again. We are not talking about unnecessary, dangerous risk, but instead the risk to move out of your comfort zone and grow. Experiencing success in overcoming fear in one area of life can encourage you to challenge your fear of other personal limitations, and to risk again and grow in unexpected, fulfilling ways.

Risking

To laugh is to risk appearing a fool.
To weep is to risk appearing sentimental.
To reach out for another is to risk involvement.
To expose feelings is to risk exposing your true self.
To place your ideas and your dreams before the crowd is to risk
their loss.
To love is to risk not being loved in return.
To live is to risk dying.
To hope is to risk despair.
To try is to risk failure.
But risks must be taken because the greatest hazard in life is to risk
nothing.
The person who risks nothing . . . does nothing . . . has nothing . . . is
nothing.
You may avoid suffering and sorrow, but you simply cannot learn, feel,
change, grow, love . . . live.
Chained by your certitudes, you are a slave; you have forfeited
freedom.
Only a person who risks is free.

—Ralph Waldo Emerson

8.6 Anger

Work rage, road rage, sideline rage—you can barely watch the news or read the paper without hearing about yet another example of uncontrolled anger. Whether it is the basketball player who leaps into the bleachers and starts punching an unruly fan, the soccer mom who ends up in jail for assaulting the referee, the disgruntled college student who opens fire on his teachers and

FYI

Scared to Death

Throughout medical history, examples abound of people who have been literally frightened to death. If fear is intense enough, body systems can be overloaded fatally, as the following examples show:

- Barbara Reyes was spending her Memorial Day weekend floating on a raft on Georgia's peaceful Lake Lanier. The calm of the quiet, warm afternoon was shattered when a man riding a motorized jet ski roared within a foot of the 40-year-old Reyes. In a panic, she paddled to shore, collapsed, and died. Randolph Simpson, the Gwinnett County coroner who examined Reyes, said, "There's no question she was literally scared to death." The man who roared by on the jet ski was arrested and charged with involuntary manslaughter.
- A 45-year-old man died of fright as he stepped to a podium to give a speech.
- An elderly man sitting on his lawn collapsed and died when a car jumped the curb and appeared to be heading straight for him.
- Panamanian dictator Omar Torrijos reportedly amused himself by killing a prisoner with an unloaded gun; the sound of the blanks firing was enough to scare the man to death.

Source: Mind/Body Health *(5th ed.), by K. Karren, N. Lee Smith, & K. Gordon (Glenview, IL: Pearson, 2014).*

CULTURE CONNECTION Patience Is No Longer a Virtue

In a study of 2,000 Brits, the luxuries of modern life have made most people incredibly impatient—across pretty much every aspect of their lives. Three-quarters of those surveyed said they believe the dominance of digital technology, such as smartphones and on-demand TVs, are to blame for this ever-growing lack of patience. Respondents reported becoming frustrated after just 16 seconds of waiting for a web page to load, and after 25 seconds of waiting for a traffic light to change. Respondents reported losing their temper after just 20 seconds of waiting for ink to dry on a greeting card. Additionally, it only takes 22 seconds for people to start cursing their computers or TVs if a show or movie doesn't immediately begin streaming correctly. Surveyed Brits also reported losing their cool after just 18 seconds of searching for a pen.

Respondents said any longer than 14 minutes spent waiting for ordered food to arrive at a restaurant would seriously try their patience. Seven minutes or more spent trying to order a drink would be enough to send them searching for a different pub.

Respondents expect to pick up their luggage after a flight within 13 minutes and assume all customer complaints they may file to be answered within two hours and 18 minutes. Waiting in line seemed to especially annoy respondents, with 45% admitting they had lost their temper after waiting an "excessive" amount of time. But, what exactly is excessive?

ESB Professional/Shutterstock.com

Impatience – a symptom of anger.

Respondents said just 30 seconds of waiting in a line would be enough to try their patience, and half said they are likely to switch to a different line if the one they are in isn't moving fast enough.

Source: ""Hurry Up! Modern Patience Thresholds Lower Than Ever Before, Technology to Blame" by J. Anderer, *StudyFinds.Org,* (September 2019).

classmates, or the guy who rams full-speed into the car that passed him—all seem to be reacting with anger to these stressful times. None of us is immune to the ravages of anger. Have you ever wanted to throw your smartphone out the window because you were disconnected after being on hold for half an hour? And more than one of us has shouted profanities at our computer when it locked up and we lost three hours of work.

FYI

Mad Driver Disease

The American Automobile Association's Foundation for Traffic Safety says that incidents of violently aggressive driving—sometimes called "mad driver disease"—rose 7% per year in the 1990s.

Source: *"Why Are We So Angry?" by D. Hales,* Parade Magazine, *September 2001, pp. 10–11.*

> Can't you see my temperature's rising? I radiate more heat than light.
>
> —*Neil Peart*

Anger is an emotional response based on the way we choose to think about events, people, or circumstances. Here are some elements of anger:

- Anger is a naturally occurring emotion connected with the "fight" part of the fight-or-flight response.
- Anger combines physiological and emotional arousal.
- Everyone experiences anger, although to widely differing degrees.
- People express anger along a continuum from resentment or jealousy to full-blown, out-of-control rage.
- Anger is different than hostility (discussed later).

Anger comes in many forms, including abuse, ridicule, physical violence, temper tantrums, sarcasm, and even the silent treatment. We might say things such as "He infuriates me!" or "You really tick me off!" Jealousy is a form of anger, as are rage, annoyance, irritation, blaming, and frustration. Even guilt, as you learned earlier in this chapter, is a form of anger—in this case, self-anger.

Here are a few ordinary circumstances in which people select anger as the primary emotion of the moment.

- *Anger in the automobile.* While driving, we get upset at how we believe other people ought to be driving.
- *Anger in competitive games.* In every sport, we find people getting upset at opponents, teammates, referees, and even themselves.
- *Anger at things that seem to be out of place.* We have thoughts that things ought to be in certain places, and when they aren't, we lose control. An example is a driver who believes the bicyclist should not be on the road and crowds him off of it.
- *Anger about taxes.* The anger we create about something over which we have no control is senseless, but we allow ourselves to get angry over it nonetheless.
- *Anger over the delay of others.* Anger over people being late occurs when we believe that others ought to function according to our timetables. We immobilize ourselves with this thought: "I have a right to be angry. She kept me waiting for an hour."
- *Anger at the disorganization or sloppiness of others.* Again, this is an attempt to change someone else's behavior according to our rules for how they ought to behave.

STRESS STORIES

Letting Go of Anger

I almost never get angry. It is an emotion I rarely experience—except when I am driving. For years, I would cuss and fuss at what I considered inconsiderate drivers. You know the ones—the drivers who desperately pass, cut in quickly, then put on the brakes to slow down and turn.

Then, one day I came across a quote from Buddha: "Holding on to anger is like grasping a hot coal with the intent of throwing it at someone else—you are the one who gets burned."

What insight! When I get angry, I'm the one who suffers. Why should I let someone I'm never going to see again control my mood and ruin my day? Inconsiderate drivers may not have any idea that they have done anything wrong, or maybe they just don't care.

Although my angry reaction is still hard to shake, when I encounter a "bad" driver now, I think of this quote. Sometimes I wave and smile. Sometimes I think about reasons why that driver did what he did. Maybe she just had a call that her child was injured at school, or perhaps he is an EMT rushing to an accident. The point is that when you hold on to the heat of anger, you are the one who gets burned.

—MH

- *Anger at inanimate objects.* You feel your anger rise as a car alarm honks endlessly, or your computer freezes up.
- *Anger over the loss of objects.* No amount of anger will turn up a lost key or a wallet.
- *Anger over world events and conditions beyond your control.* Regardless of how much you approve or disapprove of what is happening in the world, your anger will not change the situation. Similarly, your anger at the conditions of Mother Nature is unproductive. Becoming irate because the day is too hot or too cold, too windy, too rainy, or too sunny is a waste of present-moment energy.

Some people carry childhood anger into adulthood. Behavioral therapy can help these people gain a better sense of what happened to them in their lives and stop associating current situations with upsetting past events. The key is to stop looking at the present through the lens of the past.

Effects of Anger

Anger activates physiological and psychological arousal effects[6,7], including:

- Increase in cortisol and adrenalin
- Increase in blood pressure
- Increase in blood sugar
- Increased muscle tension
- Faster pulse
- Constriction of blood vessels
- Elevated serum cholesterol levels
- Decreased immune function
- Increased risk of cancer
- Increased risk of coronary heart disease
- Increased risk of diabetes
- Insomnia and fatigue
- Bulimic behavior
- Decreased eyesight

If this sounds a lot like the stress response, it is. The evidence continues to grow regarding anger and hostility. Anger may be more dangerous to health than the stress response.

The Only Reason We Get Angry

As with every emotion, anger is the result of our interpretations; *it is based on the perception that what is happening or what already happened (and even what might happen), occurred differently than how we think it should have.* Anger is our reaction when our expectancy is not met. Anger arises when we wish some aspect of the world, or somebody in it, were different than it is.

In life, we have many rules or agreements of how things ought to be. A rule is our belief or sense of surety that something should be a certain way. The laws by which we abide are a vast collection of rules, which tend to guide the population toward our common good. Without these rules, we would experience chaos daily. Rules of this kind bring order to our lives.

A basketball player who dribbles the ball, stops dribbling, then starts dribbling again is guilty of double dribbling and loses possession of the ball. Basketball has many such rules. Rules for sports and games help make them fun and competitive.

We also make specific rules that we decide are the way things ought to be for us individually. The emotion of anger happens when someone breaks one of our rules. Our thoughts about the situation usually include the words *should*, *ought to*, or *must*.

Here are some examples of rules we make about everyday events:

- Dogs shouldn't bark too loudly.
- Cats shouldn't throw up on my living room couch.

- The room should be quiet when I practice meditation.
- The music you play shouldn't be too loud.
- I was here first, so the waitress ought to take my order first.
- It should not rain on my wedding day.
- I should be able to talk to a real, live person when I call the airlines.
- This professor should be on time and should be interesting.
- My computer should work without any problems.
- People should have the good sense not to ram their grocery cart into my heels.
- People should not drive slowly in the fast lane.
- I made an appointment, so I shouldn't have to wait.

These are rules that *we make up for ourselves*. No natural or cosmic law says the house must be quiet so you can meditate. No universal law demands that the person we have asked out on a date must say "Yes." We have just decided that this is how things ought to be. Anger is the emotion we create when something happens that conflicts with how we believe things ought to be, when something happens contrary to our rules. The event itself does not make us angry any more than events can cause us to be stressed, fearful, or feel any other emotion.

Whether we get angry at other people, at things, or situations, we are responding to a perceived need to have things our way. Give it some thought, and you'll discover that *every time you have been angry, it was because you were not getting your way.*

Think back to our discussion of levels of responding from Chapter 6. Remember the scenario of Jenny standing in line waiting for a concert ticket. Had she held firm to her rule that the line should be moving more quickly than it was, the result may have been feelings of anger. Reacting in anger would cause unnecessary stress, and might even result in Jenny doing something inappropriate.

This doesn't mean we should never get angry. If we feel that something ought to be different than it is, and we can do something about it, we should channel our anger into productive action. Sometimes anger can be directed into productive action on an even larger scale. When enough people have the same rules, and agree that the rules are necessary for the safety and well-being of the entire population, those rules may become laws. This is the case with traffic laws and laws restricting smoking in public places, for example.

With this awareness, we can immediately defuse any moment of anger by being aware that our rule—not the event itself—causes us to feel anger, and then re-examining our rule. For example, if you notice the cat has thrown up on the couch, rather than letting anger cause you to do something you will regret, you can immediately look at the situation and recall the rule you have set up in your mind as the real cause of anger—the rule that cats should not throw up on the couch. With this awareness, you can function from a more positive emotional state. If we stay focused on who or what we think made us angry—in this case, the cat—we will remain upset. As we remember that we create our anger with our thoughts, we can take steps to reduce it.

STRESS STUDIES

Anger Expression and Heart Disease

Anger leads to heart disease. That much is clear. But are there certain types of anger that actually help protect against heart problems? In an article published in American Heart Journal, researchers looked at three types of anger expression: *constructive anger* (discussing anger to resolve the situation), *destructive anger justification* (blaming others for one's anger), and *destructive anger rumination* (brooding over an anger-inducing incident) and their relationship to heart disease.

Their results revealed that constructive anger expression was associated with a lower rate of coronary heart disease, but only in men. In contrast, those with destructive anger justification had an increased rate of heart disease over ten years of follow-up, for both men and women.

Source: *"Anger Expression and Risk of Coronary Heart Disease: Evidence from the Nova Scotia Health Survey," by K. W. Davidson & E. Mostofsky,* American Heart Journal, 159*(2) (2010): 199–206.*

Expressing Anger

Is it best to hold your anger in or let it out? The answer depends on who you ask and how your anger is expressed. There is evidence that expressing anger is healthy, but how you channel that anger may be even more critical to your well-being. If your anger is moderate to intense, experienced frequently, endures to the point where you are holding a grudge and are planning to get even, and is expressed in aggressive verbal and physical actions, then there is cause for alarm. You are likely at risk for the negative relationship, health, and sometimes legal repercussions related to inappropriate anger expression."[8]

It isn't difficult to find examples where inappropriate expressions of anger can escalate. "Venting" may make you feel better, but only for the moment. You might want to think twice before you kick the dog or scream at your family member or roommate. Venting your anger could contribute to the following outcomes:

1. Make you feel worse
2. Cause your situation to escalate
3. Lead to new problems you might have to fix later

Anger Blocker

In Chapter 10, you will learn forgiveness techniques that can help you express and healthily release anger. When you find yourself in a tense situation, give yourself some time to breathe. Walk away and remind yourself that it might be best to decide not to get angry in the first place. "Anger blockers" can help you do that.

Here are some tips for keeping anger in check:

- First, get in touch with your thoughts at the time of your anger, and remind yourself that you don't have to think that way just because you've always done so in the past.
- Try postponing your anger. If you typically react with anger in a specific circumstance, delay the wrath for 15 seconds, then explode in your typical fashion. Next, try 30 seconds, and keep lengthening the intervals. Once you see that you can postpone anger, you will have learned control.
- Don't try to delude yourself into believing that you enjoy something you find distasteful. You can dislike something and still not have to be angry about it.
- Remind yourself at the moment of anger that everyone has a right to be what he or she chooses, and that demanding that anyone be different will merely prolong your anger. Allow others to choose, just as you insist on your right to do the same.
- Ask someone you trust to help you. Have this person let you know when he or she sees your anger, either verbally or with an agreed signal. When you get the signal, think about what you are doing and then try the postponing strategy.
- Keep an anger journal, and record the exact time, place, and incident in which you chose to be angry. Be diligent with the entries; force yourself to record all angry behavior. You will soon find that the very act of having to write down the incident will persuade you to choose anger less often.
- After you have an angry outburst, announce that you just slipped and that one of your goals is to think differently, so you don't experience this anger. The verbal announcement will put you in touch with what you have done and will show that you are indeed working on yourself.
- Try being physically close to someone that you love at the moment of your anger. One way to neutralize your hostility is to hold hands—despite your inclination not to—and keep holding hands until you've expressed how you feel and dissipated your anger.
- Defuse your anger for the first few seconds by labeling how you feel; and if your anger is directed at another person, how you believe he or she feels as well. The first 10 seconds are the most critical. Once you pass this window of time, your anger will often subside.
- Get rid of unrealistic expectations. For example, remind yourself that it is the nature of children to be active and loud occasionally.
- Love yourself. If you do, you won't want to burden yourself with self-destructive anger.
- In a traffic jam, time yourself. See how long you can go without exploding. Work at the control aspect. Use the time creatively to write a letter or a song, or devise ways to get out of the traffic jam, or relive the most exciting experience of your life, or, better yet, plan to improve it.
- Instead of being an emotional slave to every frustrating circumstance, use the situation as a challenge to change it.
- Keep in mind that although the expression of anger may be a healthy alternative to storing it up, the healthiest choice is not to have it at all. Once you stop viewing anger as natural or "only human," you'll have an internal rationale for working to end it.

FYI

Happy Aging

Getting older makes you happier. A study found that after age 50, people report being consistently happier, less stressed, and less worried than their younger counterparts. Because of life experience, older people may be "more effective at regulating their emotions than younger adults," says psychiatrist Arthur Stone.

Source: *"Health . . . Laughter,"* The Week: The Best of the U.S. and International Media, *10 (495–496), (December 24, 2010–January 7, 2011): 22.*

8.7 Hostility

Hostility and **anger** are not interchangeable terms, even though they often are used that way. Anger is considered a temporary emotion, usually in response to a specific event, and hostility is an attitude motivated by hatefulness and animosity. Hostility often is regarded as anger that is projected outward at something or someone in an aggressive or antagonistic way. Although hostility usually is not considered an emotion, it is worthy of mention here because of the relationship between hostility and health.

Researcher Dr. Meyer Friedman thinks hostility can best be defined by its manifestations, including the following:[9]

- Irritation or anger at the minor mistakes of others
- Looking for whatever might go wrong
- Inability to laugh at what other people laugh at
- Inability to trust others
- The suspicion that other people have selfish motives
- Frequent use of obscenities
- Difficulty in complimenting or congratulating others
- Preoccupation with the "errors" of the government, large corporations, or the younger generation

Hostility is especially dangerous to the heart and may be a good predictor of heart attacks. Research shows that hostile people are more likely to struggle with hypertension, diabetes, anxiety, and depression. Hostile people are also more likely to smoke, less likely to take medications as prescribed, and less likely to be physically active.[10]

8.8 Conclusion

Do you see life as an adventure? Do you seek opportunities to stretch and grow? Are you willing to put aside your fear of failure or change and test your limits? Can you face the unexpected challenges that come your way with power and confidence?

Feeling like you are stuck in a rut, living a life of drudgery, can be highly stressful. You have a choice. You can choose adventurous living, or you can accept mediocrity. What could be more stressful than letting fear prevent you from getting what you want from life? Take control of your emotions, so they don't take control of you.

The ability to experience a wide range of emotions is part of what makes us human and keeps life interesting. Long-term negative emotions such as fear, worry, guilt, and anger can affect health in much the same way that long-term stress affects health and longevity. The challenge is in taking responsibility to control the negative emotions that can weaken our quality of life. Don't let out-of-control emotions hold you back from experiencing the adventure of living.

> Our doubts are traitors and cause us to lose the good we oft might win for fearing to attempt.
>
> —*Shakespeare*

ACTIVITY

Feel the Fear—Go for It Anyway

Purpose The purpose of this activity is to allow you to overcome a fear by taking part in an activity that is outside your comfort zone.

Directions

1. Think of something that you are nervous about or fearful of doing. Select something outside your comfort zone that you know should be done, but that you have been avoiding because you are afraid of what might or might not happen. Your assignment is

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

to break through your fear and take a risk. To get you thinking, here are some examples of students' fear:

- Ask somebody out on a date
- Quit a job
- Confront someone
- Forgive someone
- Interview for a job
- Speak in a public meeting
- Go rock climbing (fear of heights)
- Change majors
- Mend a broken relationship
- Visit someone you don't know very well but would like to, and get to know him or her better

2. Describe the thing you fear doing. Relate your thoughts and feelings about why it is fearful for you.
3. After you have completed the assignment:
   A. Describe your experience, from beginning to end, of going for it and doing the thing you feared.
   B. Describe the insights you gained about that fear.
   C. Describe the insights you gained about your own fears in general.
   D. Explain how this activity relates to stress management.

Key Point

- Emotional well-being involves the proper expression of a wide range of emotions.
- Chronic guilt and worry, fear that prevents us from living life fully, and an attitude of hostility and anger are damaging and stress producing.
- Guilt is a conscious preoccupation with undesirable past thoughts and behaviors.
- Worry is an indicator of fear that keeps the mind focused on imagined painful components of events yet to come.
- Worry is different than planning; planning brings future events into the present so we can apply appropriate control to those events.
- The most effective way to remain free of guilt and worry is to practice being mindful.
- Fear is a state of escalated worry and apprehension that causes distinct physical and emotional reactions.
- Anger is an emotional response based on the way one chooses to think about events, usually triggered by perceived provocation or mistreatment.
- Anger is considered a temporary emotion, usually in response to a specific event, in contrast to hostility, which is an attitude motivated by hatefulness and animosity.
- Researchers have discovered that certain emotions can make a person more susceptible to stress and disease. These negative emotions include anger, worry, guilt, fear, and hostility.
- Positive emotions like gratitude and happiness are explained in other chapters. Just as negative emotions contribute to unhealthy outcomes, positive emotions contribute to good health and less stress. Remember, your thoughts control your feelings.

Key Terms

somaticizing
guilt
worry
anxiety
fear
comfort zone
discomfort zone
anger
hostility

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

References

1. "Research on Somatization and Somatic Symptom Disorders: Ars Longa, Vita Brevis," by J. E. Dimsdale, *Psychosomatic Medicine, 79*(9) (2017): 971–973.
2. "Grand Challenges in Psychosomatic Research," by R. D. Jindal & J. R. Jennings, *Frontiers in Psychiatry 1* (2010): 131.
3. "Investigating the Relationships among Stressors, Stress Level, and Mental Symptoms for Infertile Patients: A Structure Equation Modeling Approach," by J. Wang et al., *PLoS one 10*(10) (2015): e0140581.
4. "A Cognitive Model of Pathological Worry," by C. R. Hirsch & A. Matthews, *Behavior Research and Therapy, 50*(10) (2012): 636–646.
5. *Wellness Guidelines for a Healthy Lifestyle* (4th ed.), by W. Hoeger, L. Turner, & B. Hafen (Belmont, CA: Wadsworth/Thomson Learning, 2007).
6. "Anger and Health Risk Behaviors," by M. L. Staicu & M. Cutov, *Journal of Medicine & Life 3*(4) (2010): 372–375.
7. "How Anger Affects the Brain and Body [Infographic]," *National Institute for the Clinical Application of Behavioral Medicine,* retrieved November 29, 2019, from https://www.nicabm.com/how-anger-affects-the-brain-and-body-infographic/.
8. "How to Recognize and Deal with Anger," by H. Kassinove, American Psychological Association, retrieved November 29, 2019, from https://www.apa.org/helpcenter/recognize-anger.
9. *The Healing Brain*, by R. Ornstein & D. Sobel (New York: Simon and Schuster, 1987).
10. "Hostility, Health Behaviors, and Risk of Recurrent Events in Patients with Stable Coronary Heart Disease: Findings from the Heart and Soul Study," by J. M. Wong, B. Na, M. C. Regan, & M. A. Whooley, *Journal of the American Heart Association, 2*(5) (2013): e000052.

chapter
9

The Importance of Values

Southern Stock/The Image Bank/Getty Images

> Nothing can bring you peace but yourself. Nothing can bring you peace but the triumph of principles.
>
> —*Ralph Waldo Emerson*

I'm not sure what my values are. What can I do to connect with my values?

I get frustrated when I know I make choices that conflict with my values. What can I do to more easily live in line with my values in my daily life?

What do my values have to do with stress management?

I nearly flunked out of college my first semester. I'm starting to think it was because I valued socializing and going with the crowd more than I valued my education. What can I do to be sure this doesn't happen again?

Learning Objectives

Study of this chapter will enable you to do the following:

9.1 Describe mediocrity as it relates to feeling stuck in your life.

9.2 Explain the connection between values clarification and stress management.

9.3 Clarify and prioritize your highest values.

9.4 Differentiate between instrumental values and terminal values.

9.5 Participate in values clarification activities.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

Real People, Real Stories

After lengthy bargaining Jon M. Huntsman, Sr., founder, and CEO of Huntsman Chemical Corporation came to an agreement with Emerson Kampen, Chairman and CEO of Great Lakes Chemical Company. Great Lakes would buy 40% of Huntsman for $54 million. As Huntsman usually did, the deal was sealed with a handshake.

Because the attorneys dragged their feet with the paperwork, this reasonably simple transaction took nearly seven months to complete. During that time, the price of raw materials decreased substantially, and Huntsman's profits skyrocketed.

Huntsman received a phone call from Emerson Kampen. Kampen informed Huntsman that, according to his bankers, 40% of Huntsman's company was now worth $250 million. Kampen felt that, given the circumstances, the $54 million price they had agreed to seven months earlier was no longer fair.

Kampen said, "I can't commit Great Lakes to make up the full estimated value, but how about splitting the difference?" Kampen was offering to pay Huntsman almost $100 million more than they had initially agreed.

Huntsman replied, "We agreed to a price of fifty-four million, and that is the price I expect you to pay."

Kampen countered, "But that's not fair to you."

Huntsman ended the conversation, stating, "You negotiate for your company, Emerson, and I'll negotiate for mine." The sale went through at $54 million.

To Huntsman, living by his principles—keeping his word—was the most important part of any negotiation, even when it cost him $100 million.

Source: *Barefoot to Billionaire: Reflections on a Life's Work and a Promise to Cure Cancer*, by J. H. Huntsman (New York: Overlook Duckworth, 2014).

9.1 The Importance of Values

Have you ever stopped to think about who you are or how you want to live your life? This is something we do not tend to dwell on very much. The answers aren't always clear or easy. We might have a good idea of some aspects of our life, such as what we want to do academically or professionally, but many parts of our lives remain undiscovered. This may stem from our fear of finding what might be there, or maybe we don't know how to look. Clarifying our values and living them daily is essential to achieving stability and inner peace in an ever-changing world.

A **value** can be defined as a way of thinking that guides choices by evoking a feeling of basic principles of right and wrong.[1] Values guide our actions, provide direction, and give meaning to life. When we feel like something is important to us, or we cherish it, we say that we value that trait, ideal, or characteristic. Our values are the drivers behind most of our choices, most of our decisions.

The decisions we make each moment create our present and our future. When you are aware of your values, making the best decision is much easier. When you are unclear about what you value most, making the best decision is more complicated. The result is inner conflict and stress.

> Be more concerned with your character than your reputation, because your character is what you really are, while your reputation is merely what others think you are.
>
> *—John Wooden*

9.2 Understanding Your Values

Knowing our values and living by them is one of the most powerful ways to gain inner peace and decrease stress. This applies to our everyday choices as well as our significant decisions. Let's say you are taking a test in your math class and glance over to see your best friend, Rick, cheating. You see the formulas written on his arm. When the professor isn't looking, Rick pushes up his sleeve and looks at his notes.

What do you do? Would you immediately report the cheating to your professor? Would you wait until after class to report your observations? Would you confront Rick after class? Or would you choose to do nothing, believing that in the end cheating will hurt Rick, and he will suffer the consequences eventually? Or maybe you feel no conflict and think Rick is smart for producing a clever strategy for cheating, and you decide you will try it yourself next time. Your values help guide you in this decision.

People who value honesty feel distressed when they cheat on a test, copy a friend's paper or shoplift from the mall. When a person places a high value on family yet finds little time

STRESS STUDIES

Altruism: Helping Others—It Feels Good

Students across the country are showing their commitment to altruism, a value they hold high. Altruism, defined as helping or giving to others without thought of self-benefit, is put into action through student participation in community projects. Service learning is now a student requirement in many universities. People become involved in community service for several reasons—for many, serving in the community is a selfless act. "Today's college students have a strong altruistic bent and are working in extraordinary ways to tackle some of our most pressing problems," said Corporation for National and Community Service CEO David Eisner. Tufts University's Center for Information and Research on Civic Learning and Engagement (CIRCLE) researches the civic and political engagement of Americans between the ages of 15 and 25. Here are some findings:

Yellow Dog Productions/The Image Bank/Getty Images

Many college students show altruism and a desire to help others by taking part in service-learning projects.

- Most young people who volunteer want to help other people. For example, young people who volunteered for environmental organizations did so to help other people (52%), not to address social or political problems (23%).
- Young people who grow up in a household where someone volunteers are twice as likely to volunteer regularly.
- Being asked is the top reason young people volunteer (closely followed by "because it makes me feel good").

Volunteering and Educational Performance: The Link

It turns out that community service doesn't just feel good; it's good for you. A study correlating community service with academic success found that students who keep a weekly community service record are significantly more likely to succeed and have a higher grade point average than those who don't. Research on the effect of school-required community service on academic performance found positive links between the two. Students who took part in school-required community service were 22% more likely to graduate from college than those who did not.

Examples of community service projects include (but are not limited to):

- Cleaning a park
- Collecting much-needed items including clothes, shoes, food, and blankets
- Getting involved with Habitat for Humanity
- Cleaning up the side of highways or other roads
- Reading to the elderly in nursing homes
- Helping a local fire or police department
- Helping at a local library
- Tutoring developmentally disabled children (for free)
- Participating in school activities that help the community

If altruism is a value you hold highly, consider the benefits of volunteering to help others, and yourself.

Source: *"Community Participation," Center for Information and Research on Civic Learning and Engagement, Tufts University. Retrieved February 26, 2014, from http://www.civicyouth.org.*

to spend with the family, stress is the likely outcome. When our actions are not in line with our values, the natural emotional consequence is stress and inner chaos.

> This above all, to thine own self be true, for it must follow as dost the night the day, thou canst not then be false to any man.
>
> —*Shakespeare*

By comparison, those who value the personality traits of altruism and compassion and who devote time to volunteer for a hospice program will find deep feelings of peace and contentment because their actions are in line with their behavior. An individual who values health will gain peace and satisfaction by taking part in regular exercise.

Think of the people we tend to respect the most in our culture. They are frequently those who live by clearly defined values. Mahatma Gandhi, the great leader of India, is an example of someone who was entirely clear about his values, what was most important to him. Despite impossible odds, Gandhi's commitment to live according to his highest values brought about the freeing of an entire nation. Gandhi knew that his choices and behavior followed his values. He was driven by his values instead of being driven by his emotions or the circumstances in his environment. In Gandhi's words, "Happiness is when what you think, what you say, and what you do are in harmony."

Discovering Your Values

One feature of the complex Buddhist principle called **dharma** can be compared to a jigsaw puzzle. Consider that every person who has ever lived is an individual piece of an enormous puzzle of several billion pieces (one for each person). Consider, further, that your piece of this enormous puzzle is a specific size and shape and fits correctly in only one precise place in this puzzle. Thus, you can't be another puzzle piece; you can only be your own.

Bettmann/Getty Images

Gandhi with his granddaughters. His behaviors matched his values.

Dharma teaches that when you find your place in the puzzle, you find satisfaction in life. You feel fulfilled, happy, and worthwhile. When a person wanders through life without meaning, not knowing where he or she fits in the puzzle, or tries to be someone else's puzzle piece, thinking that is the right way to live, this person is likely to experience burnout, confusion, unhappiness, and despair. Aimless people don't seek to discover and then live according to their unique puzzle piece. This is a source of stress.

What happens when we find our place in the puzzle? The natural consequences are inner peace, wisdom, and happiness. When we are sure about who we are, we feel fulfilled and satisfied with ourselves and the direction our life is going. We also understand that we are part of something bigger than ourselves—every piece of the puzzle is necessary for the picture to be complete.

When we live by an agenda set by someone else, we easily get caught up in living someone else's life. One primary task involved in becoming an adult is to become independent and self-directed in our thoughts and actions. Separating from the control and influence of parents and others and moving toward self-direction is a fundamental rite of passage into adulthood. However, when our values change or when new values replace existing values, conflict and stress often result.

Cognitive Dissonance

The truth is that most people don't pay much attention to their values until they find themselves in a situation where they need to make a decision based on their values. The concept of **cognitive dissonance** refers to stress caused by holding two contradictory feelings simultaneously. It happens when our behavior is inconsistent with our beliefs, values, or self-image.

As an example, Mary and her best friend, Sally, are shopping at the mall. Sally tries on a sweater and has to have it. The problem is that she has no money. Sally puts on her coat over the sweater and walks out of the store quickly. As Sally makes her getaway, the security guard races up to Mary and demands to know Sally's name. The conflict between Mary's belief that she should be faithful to her friend and her belief that it is wrong to steal results in psychological dissonance and stress. You can reduce dissonance by doing one of the following:

- Reduce the importance of conflicting beliefs
- Get new beliefs that change the balance
- Remove the conflicting attitude or behavior

Think of an example when you experienced cognitive dissonance because you had to choose between competing values. If clear values would have guided your decision, you would have felt less stress. Values clarification and acquisition will help you. Before explaining those concepts, let's explore what frequently happens when we don't take the time to get clear about our values.

9.3 Carried Away in Mediocrity

Onur ERSIN/Shutterstock.com

America's traditional values have resulted in a successful, prosperous—and highly stressed—society.

What happens when we don't discover or aren't sure of our guiding principles? What are the consequences of not knowing our inner nature, or of following someone else's perfect way—which is not ideal for us? The author, Richard Bach, spoke of this in his book titled, *One*. He said, "What would you say to your children now if you had any?" "I'd tell them to think about everything. Do I really want to do this? Doesn't matter what you do, matters if you want to do it! I'd tell them it's no fun when you come down to your last six months to wonder what happened to the best you could have been. I'd tell them nobody means to get carried away in mediocrity, but it happens unless you think about everything you do, unless you make every choice the best one you know how to make. It's like, at the end, there's this surprise quiz: am I proud of me? I gave my life to become the person I am right now! Was it worth what I paid?"[2]

Stephen Covey relates a similar analogy of the person who spends his entire life climbing the ladder of success only to realize, when he arrives at the top, that his ladder is leaning against the wrong wall.[3] Throughout life, we make choices that determine whether we get excellence and happiness or mediocrity. When we base decisions and actions on our values, we end up where we want to be.

9.4 Source of Values

Where do our values come from? They are influenced by many sources—culture, parents and family, teachers, friends, television, the Internet, social media, and a host of other media outlets. Most values that originate from these external sources stay at the unconscious level. We don't spend conscious time deciding if the things we see and hear are valuable to us.

Advertisers fully understand this principle. If they promote an idea for enough time and with enough appeal, they can convince many people to believe in nearly any value. Smoking is an excellent example. After scientific research showed the ill effects of tobacco on health, tobacco companies realized that if people believed using their product wasn't a healthy

STRESS STORIES

This Is My Life

On one occasion, when I was 24, I was jogging, getting near the end of a long run. The endorphins were cruising, the second wind was well in place, and I was feeling excellent. I was at that place where I felt like I could jog forever.

I wasn't really thinking of anything when an overwhelming thought suddenly occurred to me. It sounded something like, "Damn! This is *my* life I'm living here! My life is nobody else's. Only I can live my life, and all I will ever have is my life.

But when I go along with the crowd, I stop living my life. When I follow the direction that my parents, my teachers, my coaches, and other well-meaning people think is best for me, I stop living my own life. My life is mine to choose what I do with it. And if I don't start choosing, it's going to pass me by."

For the first time, I realized that I didn't want to spend the rest of my life settling for mediocrity, getting so caught up in the day-to-day stuff that I forget altogether what is really most important to me. I didn't want my final words when I finish this life to be "If only."

—MO

choice, they wouldn't be inclined to smoke. But given clever advertising designed to convince consumers that smoking is satisfying and healthy, millions of people have taken up a habit that most wish they had not started in the first place. If no one thought there was value in smoking or chewing tobacco, no one would choose to do it.

9.5 Values within Cultures

Culture is a pattern of learned behavior based on values, beliefs, and perceptions of the community. It is the lens through which we see the world. More important than specific cultural practices themselves are the underlying values that encourage or discourage them. Some cultures teach, for example, that you should always stay in control of your emotions. You are taught to value this control and believe that crying or expressing anger is a sign of weakness and therefore to be avoided. They tell you that men should not cry. These cultural beliefs may increase your stress because you do not feel free to express your emotions.

Another cultural value relates to what is sometimes called the Protestant work ethic. If you value hard work to the extent that you don't feel good about yourself if you are not working and being productive, you may find it hard to take part in recreation or relax to manage your stress. If your identity becomes so intricately linked with the work you do, you may lose sight of who you are when you are not working. Someone once said, "When who you are is what you do, then when you don't, you aren't."

Predominant Values in the United States

Some of the shared values in the United States are listed here.[4] Although the United States is becoming an increasingly diverse culture, and not every individual will place equal emphasis on these traditional values, studies indicate that these are accepted values in many segments of this society. While these values have contributed to a highly prosperous and advanced civilization, consider ways in which they may also add stress.

1. *Personal achievement and success.* What is good for the individual may be more important than what is good for the community or society. Emphasis is on power, competition, and wealth.
2. *Activity and work.* Hard work will be rewarded, and people who do not work hard are considered lazy, regardless of whether they have the same opportunities to achieve success.
3. *Moral orientation.* The tendency is to view things as good or bad, right or wrong—a pattern that reinforces stereotypes.
4. *Efficiency and practicality.* The short-term quick fix is often seen as the solution to a problem, rather than seeking long-term solutions.
5. *Progress.* Change is viewed as progress, and technology is highly valued. The focus is on the future rather than the present.
6. *Material comfort.* The consumer-oriented society values a high standard of living.
7. *Personal freedom and individualism.* Individual rights are highly valued, sometimes at the expense of the common good.
8. *External conformity.* Notwithstanding the value of personal freedom, pressure is applied to conform to the predominant, European American, middle-class, Judeo-Christian values.
9. *Science and rationality.* The scientific, medical approach to health has led to expectations of high-tech, quick-fix solutions with less emphasis on individual responsibility.

Predominant Alaska Native Values

Compare the prevailing American values with those of the Alaska Native culture.[5] Notice the similarities and the differences between the values.

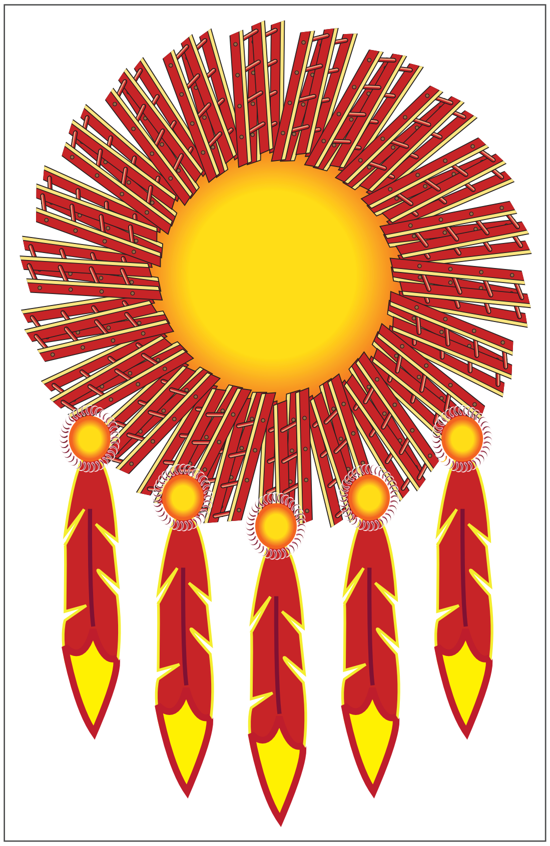
1. *Show respect to others.* Each person has a special gift.
2. *Share what you have.* Giving makes you richer.
3. *Know who you are.* You are a reflection of your family.
4. *Accept what life brings.* You cannot control many things.
5. *Have patience.* Some things cannot be rushed.

CULTURE CONNECTION The Lakota Perspective of Peace and Harmony

Leonard Little Finger, great-grandson of Chief Big Foot, who was massacred at Wounded Knee, shares his perspective on Lakota values as they relate to stress management:

> Throughout the Lakota history, beginning when they were known as the People of the Seven Council Fires, they understood the interconnectedness of creation and Creator, known to them as Tunkasila, Grandfather of all. They held paramount in their belief system that the created (people and all created) were all related to one another, and all existed within a sacred circle. The flame of the council fire was similar to the glow of the sun, and the flame represented the totality of life within a sacred circle, to be attained in conduct, behavior, and spiritual existence supported by law and value systems.
>
> The sacred pipe, Cannupa, integral to all since its inception, was brought by a divine being known as the White Buffalo Calf Woman. The rituals and ceremonies such as Hanbelciya, Vision Quest, Inipi, Sweat Lodge, Wi'wangwaci, Sundance, and the other rites are all inscribed in circles around the pipe. The rings denote the principal values, including Kinship, Respect, Generosity, and Sharing to dictate behavior and conduct to all that is in this sacred circle.
>
> Thus, (it dictates) the purpose is to fuse an individual with his or her counterparts in the community of humanity. Adherence to this allows raising or expanding of individual consciousness known to the Lakota as "Natural Law." Realizing this ancient and traditional spiritual knowledge sheds the isolated, individual personality and restores a conscious harmony with the universe or "Sacred Circle of Life," or "Cangleska Wakan." Peace and harmony replace stress and discord. The body, mind, and spirit become one in identity.

Source: Personal communication, Leonard Little Finger, May 9, 2005.



Knumina Studios/Shutterstock.com

For Native Americans, the sacred circle stands for harmony and oneness with the universe.

STRESS BUSTING BEHAVIOR

Childhood Value Messages

Many of our values have been "programmed" into our thinking and actions by the age of 10. What value messages did you learn as a child? Consider the following list:

- ○ If it's worth doing, it's worth doing well.
- ○ Clean your plate; there are starving children in Africa!
- ○ All work and no play make Jack a dull boy.
- ○ Good things happen to nice people.
- ○ The early bird gets the worm.
- ○ If you can't say something nice, don't say it at all.
- ○ Do unto others as you would have them do unto you.

Now, think about your childhood value messages. Are there any that you still value today? Are there any that you want to let go of, or alter for greater contentment in life?

Reflect on the impact of your values. Whether these values are good or bad, useful or not, is your decision.

6. *Live carefully.* What you do will come back to you.
7. *Take care of others.* You cannot live without them.
8. *Honor your elders.* They show you the way in life.
9. *Pray for guidance.* Many things are not known.
10. *See connections.* All things are related.

Reflect on the Lakota values explained in the Culture Connection feature. Take special note of the values of kinship, respect, generosity, and sharing that dictate behavior and conduct. Think about the impact of these different values on the perception of stress in a culture. Take time to reflect on how your cultural beliefs impact your values.

9.6 The Dynamic Quality of Values

Throughout life, we can benefit from taking the time to clarify the values that guide our choices. A personal value system is not static. When we are young, our values mirror those of our parents, family, or teachers. As we move through adolescence and young adulthood, we may challenge the values we learned as a child and develop more personal values resulting from a mix of what we learned from our family and what we have chosen to embrace from our culture. Think of a value you have acquired that is new or different from a value your parents taught you. Has this value contributed to your well-being?

The 18-year-old college freshman away from home for the first time, the middle-aged executive who unexpectedly finds himself out of a job, the mother returning to college after 20 years of staying home to raise a family, and the elderly widower alone after 60 years as part of a couple—all may ask the same questions as they search for meaning in their lives. Who am I? What do I really want in life? What is the right path for me to take? The answer to these questions begins by identifying our personal values and being true to them.

> It is better to conquer yourself than to win a thousand battles. Then the victory is yours. It cannot be taken from you, not by angels or by demons, heaven or hell.
>
> —*Buddha*

9.7 Acquiring Values

Many of our values are assimilated from family, friends, religion, and society. **Values acquisition,** by contrast, means to assume a new value consciously. For example, a nursing student may deliberately acquire the professional value of caring or respect for human dignity because of education and experience. Or, for the first time, you have met someone with whom you think you could spend the rest of your life. You consciously nurture the values of love and commitment as the value of independence becomes less critical to you. Values continually evolve as an individual matures in the ability to think critically and morally.

The six steps in values acquisition are:[6]

Step 1: The value is chosen freely.
Step 2: The value is chosen from among alternatives.
Step 3: The value is chosen after careful consideration of each alternative.
Step 4: The value is prized and cherished.
Step 5: The value is acted upon.
Step 6: The value is part of a pattern of repeated action (the value is incorporated into the individual's lifestyle).

9.8 Beliefs about Values

To start on our path, with our values as our guide, we must keep several ideas firmly in mind to support us.

1. We must believe that we can change our thoughts and actions. Regardless of our current situation, we have the capacity and the ability to make changes that we think are appropriate.
2. We must believe that if we are going to create long-term change in our lives, we are responsible. Nobody else will do it for us. It requires our own decision, our own motivation, and our own action.

3. We must believe that if we set our sights in a new direction, and then move confidently in that direction, we will successfully arrive near the place we wanted to go. Henry David Thoreau wrote of his time at Walden Pond:

   > I learned this, at least, by my experiment; that if one advances confidently in the direction of his dreams, and endeavors to live the life which he has imagined, he will meet with success in uncommon hours.

4. We must be clear that our values determine our actions and behaviors. We may not be clear about what we value, but our choices depend on what we believe is most important to us. All decision making is based on values clarification.

Values are the foundation for figuring out who we are and how we live. They strongly influence the knowledge, attitudes, and beliefs that make us unique individuals.

9.9 Types of Values

Instrumental and Terminal Values

Values are enduring beliefs that a way of being, or acting in a certain way, is personally or socially preferable to an opposite or converse way of being or acting. There are two kinds of values:[7]

1. **Instrumental values,** which consist primarily of personal characteristics and character traits.
2. **Terminal values,** which are the outcomes we work toward, or we believe are essential and desirable.

Instrumental values involve ways of being that help us arrive at our terminal values. Figure 9.1 provides examples of instrumental values.

Terminal values are end states of feeling. These form the emotional states we desire to experience. Terminal values make our lives fulfilling, satisfying, and worthwhile. Figure 9.2 presents examples of terminal values.

☐ Ambitious (hardworking, aspiring)
☐ Broad-minded (open-minded)
☐ Capable (competent, effective)
☐ Cheerful (light-hearted, joyful)
☐ Clean (neat, tidy)
☐ Courageous (standing up for your beliefs)
☐ Forgiving (willing to pardon others)
☐ Helpful (working for the welfare of others)
☐ Honest (sincere, truthful)
☐ Imaginative (daring, creative)
☐ Independent (self-reliant, self-sufficient)
☐ Intellectual (intelligent, reflective)
☐ Logical (consistent, rational)
☐ Loving (affectionate, tender)
☐ Obedient (dutiful, respectful)
☐ Polite (courteous, well-mannered)
☐ Responsible (dependable, reliable)
☐ Self-controlled (restrained, self-disciplined)

FIGURE 9.1
Instrumental Values Checklist

☐ A world at peace (free of war and conflict)
☐ Family security (taking care of loved ones)
☐ Freedom (independence, free choice)
☐ Equality (brotherhood, equal opportunity for all)
☐ Self-respect (self-esteem)
☐ Happiness (contentedness)
☐ Wisdom (a mature understanding of life)
☐ National security (protection from attack)
☐ Salvation (saved, eternal life)
☐ True friendship (close companionship)
☐ A sense of accomplishment (a lasting contribution)
☐ Inner harmony (freedom from inner conflict)
☐ A comfortable life (a prosperous life)
☐ Mature love (sexual and spiritual intimacy)
☐ A world of beauty (beauty of nature and the arts)
☐ Pleasure (an enjoyable leisurely life)
☐ Social recognition (respect, admiration)
☐ An exciting life (a stimulating, active life)

FIGURE 9.2
Terminal Values Checklist

The two listings in Figures 9.1 and 9.2 appear in a checklist format for you to use to assess your values. These lists aren't exhaustive. Instead, each provides examples of the two types of values and shows how they differ. Additional terminal values, for example, could include, among many others, good health, power, passion, adventure, spontaneity, and control.

9.10 Values Clarification

Finding out what is most important to us may seem like an overwhelming task because we have so many things to consider. **Values clarification**—the process of discovering and applying what we genuinely value—helps reduce the stress that comes from making decisions that are inconsistent with our values. Values clarification is a mental and spiritual process that helps close the gap between what we value and what we do.

Many companies and corporations around the world go through the same process of discovering what is most important to the company, and then striving to live according to what they learn. The result is often called a mission statement or a constitution.

9.11 Creating Your Personal Constitution

The following 3-step process will guide you in clarifying and applying your fundamental values. You will begin by identifying your values. Next, you will prioritize your values. And finally, you will write a descriptive paragraph for each of your values. Complete the Stress Management Activity at the end of this chapter as you move through this process.

Step 1: Identify Your Values

Begin by completing the following activities—Instrumental and Terminal Values Selection and Your Funeral.

Activity #1: Instrumental and Terminal Values Selection Review the listings of Instrumental and Terminal Values in Figures 9.1 and 9.2. Put a checkmark by each value that is important to you. Include additional instrumental and terminal values that aren't on the list.

Activity #2: Your Funeral Stephen Covey suggests another way to uncover the things that matter most to you. With your eyes closed, imagine the following scenario while someone else reads it to you:

> See yourself going to the funeral of someone you love. Picture yourself driving to the funeral parlor or chapel, parking the car, and getting out. As you walk inside the building, you notice the flowers and the soft organ music. You see the faces of friends and family as you pass along the way. You feel the sense of sorrow that fills the room for losing this special person. You also sense the shared joy of having known this person radiating from the hearts of all the people there.
>
> As you walk to the front of the room and look into the casket, you suddenly come face to face with yourself. This is your funeral, and all these people have come to honor you. They are here to express their feelings of love and appreciation for your life.
>
> As you take a seat and wait for the services to begin, you look at the program in your hand. There will be four speakers. The first speaker is someone from your immediate family—perhaps your mom or dad, a brother, sister, aunt or uncle, a cousin or grandparent. The second speaker is one of your best friends, someone who knew the kind of person you were. The third speaker is from your work or an instructor in your school. The fourth is someone from your church or community organization where you have been involved in service.
>
> Now think deeply. What would you like each of these speakers to say about you and your life? What kind of son or daughter would you like their words to reflect? What kind of friend would you like to have others say you were? Were you there for others when they needed you? Did you care for them, trust them, and have a deep respect for them? What would your best friend say about you at your own funeral? What about someone who is a neighbor who knows of you, but doesn't know you well? What contributions would you like them to have said you made to other people's lives? What achievements would you want them to remember? [3]

Based on the Instrumental and Terminal Values lists you filled in and the insights that came to you as you thought about your own funeral, record your thoughts in the Stress Management Activity at the end of the chapter. In no particular order, what came to you as being your highest values? Write down all the values that came to mind, it doesn't matter how many. What matters is that they are yours. Look back at the Tombstone Test you completed as an assessment in Chapter 2. Compare what you wrote then to the values you have identified in this chapter.

You may find inconsistencies. You may find that there are some values about which you are doing nothing at present. That's okay; list them if they are essential to you. For example, you might value your health highly, but you may not be doing anything currently to improve your health and well-being. You still hold health as a high personal value.

Now that you have identified and made a list of all your important values, continue to Step 2.

> To be nobody but myself in a world which is doing its best night and day to make me everybody else—means to fight the hardest battle which any human being can fight, and never stop fighting.
>
> *—e.e. Cummings*

Step 2: Prioritize Your Values

Next, prioritize your list of values in their order of importance to you. The value you feel is the most important goes at the top of the list. The next significant value goes next, and so on through your entire list.

You may ask why this is a necessary step. *If you are clear about the order of your highest values, no decision is difficult.* This is the case for life's big decisions as well as the little decisions. To illustrate, imagine that you have, as one of your highest values, seeking excitement and being a thrill-seeking risk taker. You also have security and stability as a value. You recognize that you do not hold this second value as high as the first.

Now, if you happen to be in school studying to be an accountant, which means spending most of your professional life at a desk crunching numbers, you probably will find little satisfaction in that career path. Even though it is a stable, secure job, you have determined that you would find more fulfillment and meaning doing something that involves excitement and taking risks.

Imagine that you were offered a high-paying job requiring you to live in another country where you don't know the language and don't know anyone. Whether you would accept the job depends on which values you ranked the highest. If you value adventure and risk-taking, along with an increase in your finances, more highly than some of your other values, you would consider the proposal. If you value security, safety, and a fruitful family life more highly, you probably would pass on this job offer.

Your order of values applies when you make smaller decisions as well. Imagine that one of your values is high-level health and well-being. Another one of your values is being social and having an enjoyable time with friends. One of your friends tells you she is having a party on Friday. You know what kind of parties she throws: a lot of drinking and all the other things that go along with plentiful alcohol. Whether you will go is an easy decision,

STRESS STORIES

Finding the Worth of Values

One day in class, we were discussing this idea of prioritizing values in a way that would propel someone toward the most fulfilling life. The reason this is so important became clear. One student went through the entire process of finding her highest values, putting them in order, and then attaching a clarifying paragraph to each value. As I looked at her list, I saw that she had some major discrepancies between her values and her daily behavior. I also noticed that both her values and her behaviors were mediocre. The number-one value in her life was her dog. This was the most important thing to her. She really loved her dog, and I respected that fully, but she seemed to be setting herself up for disappointment if something were to happen to the dog.

The other values she listed were uninspiring by any standards. Her life was similarly dull. Her ship didn't have a rudder. She was not the captain of her craft. If she would have asked herself, "What would my values have to be to create my ultimate destiny, to be the most amazing person I could be, to have the most impact in my lifetime?" she probably would have made a far different list of values. She would have designed them in an order that enabled her, and motivated her, to rise above mediocrity. She would have charted a different destiny for herself.

—MO

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

TIME TIP

"I made a list of the top 10 things I value in my life and wrote them on a card. I carry the card with me every day. When I have trouble deciding what the most important use of my time is, I look at my card. This has helped me prioritize and has saved me so much stress and worry. I can spend my time on the things I most value."

—Jackie W.

depending on which value you hold more highly. If you value socializing over your good health, the obvious choice is to go to the party. If you value your health more highly than socializing, you probably won't show up at the party, or you might decide to go as the designated driver.

How you prioritize your values is up to you. *It must be your decision*. The order of your values will probably change as you go through various stages of your life. For example, while you are in school and unmarried, you might not rank a family relationship as highly as you rank your academic development. As you create a family and develop your career, these values will become more relevant to you. They might be on your list now, but not ranked as highly.

You could also ask yourself, "If I wanted to design a life that I really desire, a life that would be meaningful and satisfying, what would my values need to be?" It is possible for us to look at our values and see if we can rearrange them (change their order), add others, and subtract some, to have the most significant impact on our own lives.

What would be the single most important value that would propel you toward living your life the most fully? What would be the next most important value that you could integrate into your life that would have the most significant positive effect? Perhaps you have always felt that freedom is the most important thing to you. And this freedom has resulted in a level of loneliness that is uncomfortable for you. If you were to include the value of intimacy as a higher value than freedom, your new focus would fill that gap you feel is currently lacking.

You now have a list ranking your important values starting with your single most important value. Again, you may or may not be living your life currently as a reflection of your prioritized values. The vital learning in this step is to become aware of your highest values.

Step 3: Write a Clarifying Paragraph for Your Values

In this step, make a clear description of living your highest values—write a clarifying paragraph for each of your top values as if you were living each one perfectly already. Write these clarifying paragraphs as affirmations. An **affirmation** has the following three characteristics:

1. Write your affirmation as a *positive statement*. If one of your values happens to be that of maintaining high-level health, your statement might say: "I eat food that is healthy for my body, I exercise regularly, and I rest my body well to rejuvenate and recharge myself." You wouldn't write your statement this way: "I don't put unhealthy food in my body. I never go through a day without exercising, and I don't let stress get the upper hand." We are developing a mental image or picture of an ideal way of being. It may not be happening right now, but if we have the correct picture clearly in our minds, we are much more likely to act on that picture. This happens best when we write positive statements.
2. Write your clarifying affirmations as *"I" messages,* as the earlier examples show. When you put yourselves into the affirmation, your mind receives the message that you are the one who is making the change.
3. Write your clarifying paragraph in the *present tense,* as if it is happening right now. For example: "I eat food that is healthy for my body, I exercise regularly, and I rest my body well to rejuvenate and recharge myself." This is instead of: "I will eat healthy food. I will exercise. I will do things to manage my stress levels." The psychology behind this is similar to the other two: When we tell our mind, again and again, that something is happening currently, just like the advertisers do, we tend to believe it and will be more likely to act in ways that assume it is true for us. When we place the realization of that value in the future, our mind considers that it may happen in the future, but not now.

Don't be discouraged if you write a clarifying paragraph and realize that this doesn't represent your current reality. That is okay. You are developing a vision to guide you.

FYI

Ben Franklin's 13 Virtues

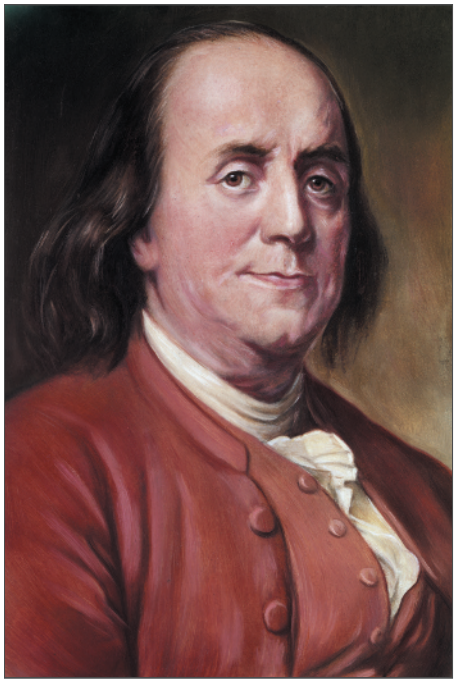
After a half-century of regular practice, Benjamin Franklin finally recognized that he had realized his values. Franklin shows us how powerful this process could be. When he was 27 years old, he had a midlife crisis. While working in a printing plant in Philadelphia, he felt like he hadn't accomplished anything. He asked himself some important questions that made him contemplate what his life was all about. After careful reflection, he discovered 13 values that were supremely important to him, and by living according to what he thought each one meant would motivate him to, in his words, "become a perfect mortal." In his autobiography, he called these his 13 virtues.

1. **Temperance.** Eat not to dullness; drink not to elevation.
2. **Silence.** Speak not but what may benefit others or yourself; avoid trifling conversation.
3. **Order.** Let all your things have their places; let each part of your business have its time.
4. **Resolution.** Resolve to perform what you ought; perform without fail what you resolve.
5. **Frugality.** Make no expense but to do good to others or yourself; i.e., waste nothing.
6. **Industry.** Lose no time; be always employ'd in something useful; cut off all unnecessary actions.
7. **Sincerity.** Use no hurtful deceit; think innocently and justly, and, if you speak, speak accordingly.
8. **Justice.** Wrong none by doing injuries, or omitting the benefits that are your duty.
9. **Moderation.** Avoid extremes; forbear resenting injuries so much as you think they deserve.
10. **Cleanliness.** Tolerate no uncleanliness in body, cloaths, or habitation.
11. **Tranquillity.** Be not disturbed at trifles, or at accidents common or unavoidable.
12. **Chastity.** Rarely use venery but for health or offspring, never to dullness, weakness, or the injury of your own or another's peace or reputation.
13. **Humility.** Imitate Jesus and Socrates.

After Ben Franklin had decided on his highest values, he described each one in a short statement, so he was clear what each of them meant to him. Then he organized his life in 13-week cycles. Each week he mentally focused on one of his values as the underlying basis for all his activity. He tried to pull his performance in line with his values.

At the age of 79, Ben Franklin wrote that he had come to an important conclusion: He said he believed he had achieved oneness with his governing values. His values and his behaviors were one. He had earned the right to the consequential feeling of inner peace. As a result, Franklin contributed a great deal to make the United States a better country, his own life more productive, and our lives happier. He created a lifetime of achievement and success based on how he lived according to the values that mattered most to him.

Source: Autobiography, *by B. Franklin (London: MacMillan, 1993).*


Bettmann/Getty Images

Ben Franklin spent his life striving to live according to his highest values.

Values clarification and realization do not constitute a once-in-a-lifetime activity; rather, it is an ongoing process of conscious reflection and deliberate action for sorting out what is most important to you. Values are more than ideals we'd like to reach. They should be reflected in the way we live each day.[8] The end result is increased awareness, focused direction, and greater inner peace.

The work of Ben Franklin and other wise individuals of his time left a legacy that affects nearly every aspect of our life today. After months of demanding work, the Founding Fathers of our country created the U.S. Constitution. This document of national values guides the creation of all laws in every legislative body in the country.

Similarly, on a personal level, our "personal constitution" can be our private guide to every decision we make during our lifetime. This process isn't easy—which is why so few people take the time to undertake it. Going with the flow and watching to see where the current takes us is more comfortable. But those who go through this process, be it a major corporation, a family, or an individual, find tremendous value in selecting the path of their choosing. They find their piece of the puzzle, and they experience the joy and satisfaction of a fulfilling life.

> The measure of a man's real character is what he would do if he knew he would never be found out.
>
> —*Thomas B. Macaulay*

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

9.12 Conclusion

A ship without a rudder drifts aimlessly in the sea. Similarly, if we don't know why we are alive and what is most important to us, we spend much of our lives wondering and wandering. Values clarification puts a rudder in the water and helps us move in the direction that is best for each of us on a personal level.

The goal of values clarification is to facilitate self-understanding. This dynamic and ongoing process results in behaviors that are consistent with values. There is tremendous power in discovering and living according to our highest values. Life has meaning and real satisfaction. Inner peace is the natural consequence.

Your values can become the basis for every decision you make. Your task now is to follow through, as Ben Franklin did, and internalize your values. By looking at your values often and thinking deeply about what they mean to you, little by little, these values become part of you. They guide you to become the person you most want to be. You experience the type of life you really want. You are the captain of your ship.

ACTIVITY

9.1 Creating Your Personal Constitution

Purpose The purpose of this activity is to help you:

1. Discover and prioritize your governing values
2. Write clarifying statements for your values
3. Create your constitution
4. Reduce your stress by making choices in harmony with your values

I. Identify and Prioritize Governing Values

What matters most to you, and what do you value the most? What value, idea, or principle has such great worth that you would dedicate your life to living that value?

1. To answer these questions, begin by listing all the values that came to mind as you completed the Instrumental and Terminal Values Selection and Your Funeral activities in this chapter. Do not list them in any order; just write down all the values that seem worthwhile to you. List as many values as you'd like, but start with at least 10 to 15.
2. Next, prioritize your list of values according to their worth to you. As you do this, you may want to consider the following question: "If I were to design my own life; if I were going to create a set of values that shape the ultimate destiny I desire; what would they need to be, and in what order?"

II. Develop Clarifying Statements and Your Personal Constitution

Write a clarifying statement for your prioritized values. Answer the questions, "What does this value mean to me? If I were living that value perfectly, what would my behavior be like, and how would I describe it?" Consider the following guidelines from earlier in the chapter as you write each clarifying statement:

- Write each statement as an affirmation, a *positive statement.*
- Write each clarifying statement as an *"I" message.*
- Write your clarifying paragraph in the *present tense,* as if it is already happening.

For example, a properly written clarifying paragraph for the value of good health might sound like this: *"I am healthy and strong. My body and mind function perfectly, always. I treat myself with respect. I eat well. I get plenty of exercise, enough rest, and manage my stress in excellent ways. My mind and body function perfectly."*

Once you have completed this process, you will have created your constitution—the standard for everything you do in your life.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

Key Points

- A value can be defined as a belief upon which one acts by preference. Values give direction and meaning to one's life.
- Clarifying our values, and understanding what is central to defining who we are as individuals, helps reduce stress.
- Dharma teaches us that when we find our place in the puzzle of life, we attain satisfaction in life; we feel fulfilled, happy, content, and worthwhile.
- Cognitive dissonance happens when our behavior is inconsistent with our beliefs, values, or self-image.
- Most of our values remain at the unconscious level unless we examine them consciously.
- Values acquisition, the conscious assumption of a new value, has 6 criteria.
- Instrumental values consist primarily of personal characteristics and character traits.
- Terminal values are end states of feeling that we work toward that make our lives fulfilling, satisfying, and worthwhile.
- Values clarification, the process of applying what we genuinely value, helps reduce the stress that comes from making decisions that are inconsistent with our values.
- The three-step action plan for values clarification results in the development of one's personal constitution.

Key Terms

value
dharma
cognitive dissonance
culture
values acquisition
instrumental values
terminal values
values clarification
affirmation

References

1. "Values, Psychology of," by D. Oyserman, *International Encyclopedia of the Social & Behavioral Sciences 10* (2015).
2. *One*, by R. Bach (New York: Dell Publishing, 1988).
3. *The 7 Habits of Highly Effective People*, by S. Covey (New York: Simon & Schuster, 1989).
4. *Strangers to These Shores: Race and Ethnic Relations in the United States,* by V. Parrillo (New York: Macmillan, 1990).
5. "Health Care in Alaska Native Communities: Learning Firsthand of the Challenges" (CAM at the NIH), by National Center for Complementary and Alternative Medicine, *Focus on Complementary and Alternative Medicine,* 7(2) (2005): 3–4.
6. *Interpersonal Relationships* (6th ed.), by E. Arnold & K. Boggs (Philadelphia: Elsevier Saunders Co., 2011).
7. "Rokeach's Instrumental and Terminal Values as Descriptors of Modern Organisation Values," by K. Tuulik, T. Ounapuu, K. Kuimet, & E. Titov, *International Journal of Organizational Leadership 5* (2016).
8. *An Invitation to Health: Choosing to Change* (11th ed.), by D. Hales (Belmont, CA: Wadsworth/Cengage Learning, 2011).

chapter 10

Spirituality

I have never talked about spiritual issues in any college class. What does spirituality really mean and what does it have to do with managing my stress?

How can I bring spirituality into my daily life in a way that will help me cope with, or even prevent, stress?

Can I be spiritually healthy even though I don't go to church?

Can prayer change anything?

I was deeply hurt by my best friend and can't seem to get over it. My feelings cause me high stress. How can I learn to forgive my friend so I can get on with my life?

Triff/Shutterstock.com

> We are not human beings on a spiritual journey, but spiritual beings on a human journey.
>
> —*Pierre Teilhard de Chardin*

Learning Objectives

Study of this chapter will enable you to do the following:

10.1 Describe the effect of spirituality on stress.

10.2 Differentiate between the terms *spirituality* and *religiosity*.

10.3 Explore the research linking spirituality and health.

10.4 Summarize the barriers to research on spirituality.

10.5 Describe five qualities of spiritual health.

10.6 Develop a personal plan to reduce stress through spiritual balance.

Real People, Real Stories

Maria's Story I was in love with my high school sweetheart. We were going to get married and have 6 children. We were best friends. Our daily lives revolved around each other. After being together every possible moment for 5 years, he phoned me to say he didn't want to be together anymore. Giving no explanation, he was out of my life forever. At first, I was in shock. We had been talking about marriage, and now he's out of my life. After the shock, I was in denial, then depression. How was I even supposed to live? My whole life was turned upside down. All my plans were ripped apart.

Though I may not sound like it, I'm not a stressed-out person, and I've tried to avoid drama, but I didn't manage this situation well. I skipped classes and called in sick to work. I couldn't sleep, and I was unhealthy from lack of nutrition. I have a supportive family, yet I felt all alone. I couldn't eat, and sometimes I felt like I could hardly breathe. I felt like my life was over and I had no reason to live.

There is light at the end of this story. When I felt I had no one, I prayed. I was comforted and gradually began to understand that no one knows why bad things happen. I learned to trust that everything has a reason. God showed me to be patient because He was trying to work in my life. Shortly after our breakup, I had an opportunity to go on a life-changing mission to Jamaica. Now my life is better than ever.

In hindsight, I learned some lessons about life that I wouldn't have learned any other way. I've become a better, more understanding person because of this experience. I also have learned that, because of my faith, I can handle the challenges that are part of life. I genuinely believe that all the other aspects of life branch off from spirituality. I now feel fulfilled inside, and it reflects in all the other areas of my life. Spirituality is different for everyone, but for me, this is what it is, and this is how I cope with stress, and with every situation in my life. This is a daily walk. I may have been happy at times before, but now I know what it feels like to be joyful.

10.1 Spirituality

Spirituality is at the heart of stress management. A healthy spiritual life is a potent prescription for enjoying balance and health. People with a deep sense of spirituality view life differently. They have a purpose, they enjoy a sense of meaning in life, and they have a broader perspective. Spirituality buffers stress. People with a deep understanding of spirituality are not defeated by crises. They can relax their mind, elicit the relaxation response, and heal more quickly and completely.[1]

Think back to the dimensions of health explained in Chapter 1. In this chapter, we focus on the spiritual dimension. You will learn that the spiritual dimension generates a sense of peace with yourself and the world. Rather than searching outside yourself for answers, you realize that the source of your contentment is inside you.

Discovering the contemplative, spiritual life requires not so much a radical change in lifestyle as a shift in awareness, an internal adjustment. It is the hidden intention of our spiritual essence, rather than outward circumstances of our lives, that brings peace.[2] Peace is an outcome of spiritual health.

Walter Quirtmair/Shutterstock.com

What is life all about? Pondering the vastness of the universe, and what it is that brings meaning to our existence, contributes to spiritual growth and inner peace.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

FYI

Spirituality in America

A vast majority of Americans (87%) say they believe in God;* 89% say they believe in God or a universal spirit.**

Does the trend toward spirituality apply to young adults as well? To help answer that question, a major University of California–Los Angeles (UCLA) research program tracked the spiritual growth of students during their college years (see Stress Studies: Spiritual Changes in Students during the Undergraduate Years). The study revealed that today's college students have remarkably high levels of spiritual interest and involvement. Many are actively engaged in a spiritual quest and report that to "some" or "a great" extent they are searching for meaning and purpose in life.***

Sources: *"Religion," Gallup, May 7, 2017, retrieved November 13, 2019, from http://www.gallup.com/.

**"Religion," Gallup, June 23, 2016, retrieved November 13, 2019, from http://www.gallup.com/.

***"Spirituality in Higher Education: Students' Search for Meaning and Purpose," a National Study of Spirituality in Higher Education, Higher Education Research Institute, University of California, Los Angeles, retrieved February 1, 2011, from www.spirituality.ucla.edu.

10.2 The Spiritual Quest

At a time in history when stress is said to be epidemic, our nation not surprisingly is searching for answers about the meaning of life. Despite the chaotic appearance of things, spirituality has come to the forefront in the workplace, politics, education, and even healthcare.[3] Events such as natural disasters, political turmoil, economic downturns, and the wildly fluctuating stock market, which change the lives of millions, cause us to pause and think about what is truly important in life.

Americans are looking for answers and seeking guidance on human spirituality, as evidenced by a surge in bestselling books such as *The Book of Joy, The Power of Now, Super Attractor: Methods for Manifesting a Life beyond Your Wildest Dreams, Dying to Be Me,* and *Infinite Potential: The Greatest Works of Neville Goddard*.[4]

People sense that something is missing. Some have found that they cannot buy enough material goods to bring them peace. Turning to drugs, alcohol, and sex doesn't fill the void. Instead, it leaves an emptiness and continued searching. People of all ages are finding direction in the spiritual dimension of health as they seek fulfillment and a meaningful life. The emphasis of this chapter is on self-discovery, encouraging you to reflect on the information presented, complete the spiritual assessment, and develop an action plan to grow in the spiritual dimension of health.

Discussions of spirituality are no longer limited to religious settings but are part of current events and daily life. Universities offer courses such as "The Meaning of Life" and "Care of the Soul." Corporate health-promotion programs now offer classes on spiritual wellness along with courses on exercise and nutrition. Spiritual and "energy" therapies have become commonplace in our culture. Mainstream medical journals have begun to publish healing studies. Along with healthcare professionals' increasing acceptance of the spiritual dimension of health, we see a corresponding increase in research on prayer, meditation, and resilience. We have come to acknowledge that wholeness of health incorporates body, mind, and spirit.

10.3 Spirituality and Religiosity

All humans have a **spiritual dimension** that strives for inner peace, meaning, and purpose even for those who do not believe in any god. The spiritual dimension tries to be in harmony with life and the universe, it strives for answers beyond the day-to-day grind, and it sometimes becomes the sustaining power when a person faces emotional stress, physical illness, or death.[5]

Spirituality is a process, a journey, the essence of the life principle of a person, a belief that relates a person to the world, and a way of giving meaning to existence. It is a personal quest to find meaning and purpose in life, and a relationship or sense of connection with a higher power.[6]

Think of spirituality as having both a vertical dimension, which involves a transcending relationship with a higher power and a horizontal dimension, which consists of a sense of purpose and meaning in life.[7] This horizontal, human dimension involves a perspective on the self and on the world within which we exist.

Spirituality is centered on the values that we cherish, our sense of who we are and where we came from, our beliefs about why we are here—the meaning and purpose we see in our work and our life—and our sense of connectedness to each other and the world around us. It generates the actions by which we deal with the realities that surround us. Spirituality is an integral dimension of the health and well-being of every individual.[8]

Religiosity refers to a unified system of beliefs and practices about life and the world relative to the supernatural that unite the believers or followers into a social organization or moral community.[9] It relates to a person who accepts the tenets of, and actively participates

> The spiritual journey does not consist of arriving at a new destination where a person gains what he did not have, or becomes what he is not. It consists of the dissipation of one's own ignorance concerning oneself and life and the gradual growth of that understanding which begins the spiritual awakening. The finding of God is a coming to one's self.
>
> —Aldous Huxley

STRESS STUDIES

Spiritual Changes in Students during the Undergraduate Years

In 2010, UCLA researchers concluded a 7-year study examining how students change during the college years and the role that college plays in supporting the development of their spiritual and religious qualities. Funded by the John Templeton Foundation, Spirituality in Higher Education: Students' Search for Meaning and Purpose is the first national longitudinal study of students' spiritual growth.

The researchers report that the findings supply a convincing argument for the proposition that higher education should attend more to students' spiritual development *because spirituality is essential to students' lives.*

Promoting students' spiritual growth will help create a new generation that is more caring and more globally aware, while also enabling students to respond to the many stresses and tensions of our rapidly changing technological society with a greater sense of serenity.

This national study reveals that religious engagement among students declines during college, but their spirituality shows substantial growth. Students become more caring, more tolerant, more connected with others, and more actively engaged in a spiritual quest. The authors also found that spiritual growth enhances other outcomes, such as academic performance, psychological well-being, leadership development, and satisfaction with college.

The study named several college activities that contribute to students' spiritual growth. Some of these—study abroad, interdisciplinary studies, and service learning—appear to be effective because they expose students to new and diverse people, cultures, and ideas. Spiritual development is also enhanced if students engage in "inner work" through activities such as meditation or self-reflection, or if their professors actively encourage them to explore questions of meaning and purpose. Spiritual development is impeded when students engage in activities that distract them from the everyday experience of campus life—activities such as watching television and playing video games.

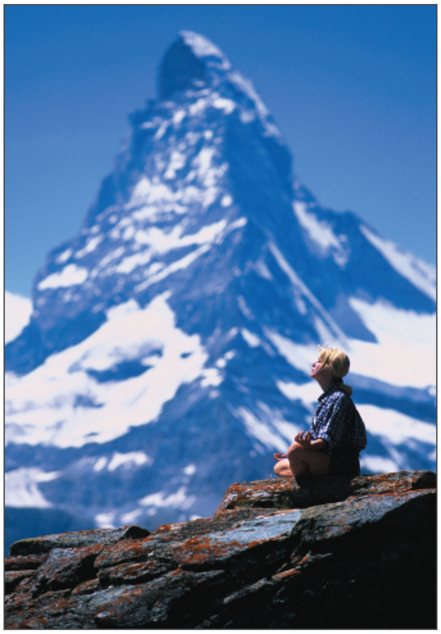
Source: Cultivating the Spirit: How College Can Enhance Students' Inner Lives, *by A. Astin, H. Astin, & J. Lindholm (San Francisco: Jossey-Bass: 2010). "Spirituality in Higher Education: Students' Search for Meaning and Purpose," A National Study of Spirituality in Higher Education, Higher Education Research Institute, University of California, Los Angeles, retrieved February 1, 2011, from www.spirituality.ucla.edu.*

in, an organized religion and its traditions. A religious person is one who embraces specific religious views and incorporates them into his or her worldview.[10]

Spirituality is a much broader view that also includes non-religious beliefs and expressions. Although spirituality may involve traditional religious beliefs and practices, a person may be deeply spiritual, yet not embrace a religion. For example, he or she may have faith in and devotion to an omniscient, all-powerful God or a higher power but not be affiliated or involved with an organized religious denomination or group.

sirtravelalot/Shutterstock.com

Religiosity refers to participation in or adherence to the beliefs and practices of organized religion.



ML Sinibaldi/Flame/Corbis

Spirituality is a personal quest to find meaning and purpose in life, and a relationship or sense of connection with a higher power.

Conversely, an individual may be religious but not necessarily very spiritual. Perhaps this person attends church regularly, tithes, and lives by the tenets of that church but does not pray, meditate, or seek direct experience with an omniscient God or universal power.[11]

Many people are both religious and spiritual. Religious beliefs and practices can be an essential aspect of spiritual development and contribute to spiritual health.

We may or may not choose to take part in religion. However, everyone has a spiritual dimension, just as everyone has an emotional, mental, and physical dimension. But does our logical, scientific-thinking mind interfere with our spiritual experience? How do we best grow spiritually? Should belief, rather than science, guide our spiritual development? Can we ever really explain, from a scientific perspective, concepts related to something as personal as spirituality? Reflecting on compelling questions can help motivate us to nurture our spiritual dimension.

10.4 Research on Spirituality

Scientific studies have found factors that contribute to physical health. Can scientific studies also find factors that contribute to spiritual health? Do "best practices" or "evidence-based practices" apply to spiritual health? With increasing rigor, studies are being conducted

CULTURE CONNECTION A Native American Perspective

Tom Brown, Jr., a Native American, writes of the spiritual nature of man. He relates the following discussion he had with another Native American whom he simply calls Grandfather, in which he learns about the way the logical mind gets in the way of focusing on the spiritual dimension. Grandfather said:

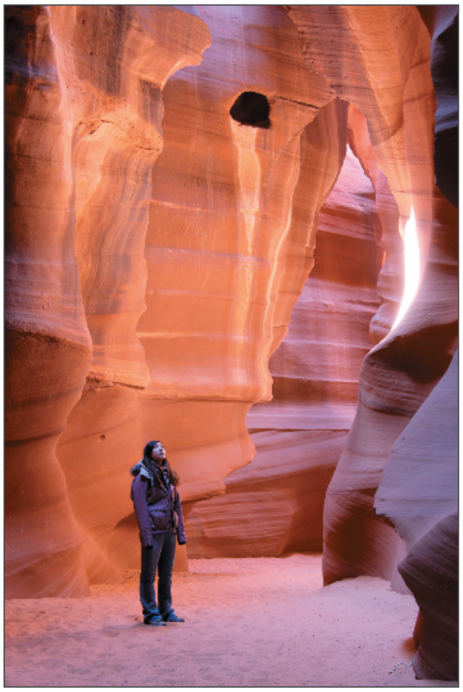
> Man is like an island, a circle within circles. Man is separated from these outer circles by his mind, his beliefs, and the limitations put upon him by a life away from the Earth. The circle of man, the island of self, is the place of logic, the "I," the ego, and the physical self. That is the island that man has chosen to live within today, and in doing so, he has created a prison for himself. The walls of the island prison are thick, made up of doubts, logic, and lack of belief. His isolation from his greater circles of self is suffocating and prevents him from seeing life clearly and purely. It is a world of ignorance where the flesh is the only reality, the only god.

Brown continues:

"Beyond man's island of ego, his prison, lays the spirit-that-moves-in-all-things, the force that is found in all things. It is a world that communicates to all entities of Creation and touches the Creator. It is a circle of life that houses all man's instinct, his deepest memory, his power to control his body and mind, and a bridge that helps man transcend the flesh. It is a world that expands man's universe and helps him to fuse himself to the Earth. Most of all, it is a world that brings man to his higher self and to spiritual rapture.

"As I settled back into my Quest, I began to understand what had been given to me. I realized that the power of the pure mind is what makes all spiritual communication pure and unrestricted. The logical mind I viewed as a barrier or filter to that communication. Any time that rational mind becomes active with its need to analyze, define, verbalize, or interpret in any way, it sets aside and imprisons the pure mind. As I sat contemplating this, I began to realize a more profound sense of duality. I now could understand that the pure mind and the logical mind were two separate entities. When one was active, the other was sleeping or set aside.

"So, too, did I begin to understand why the logical mind was so dominant and strangling. After all, it was that mind that society wanted us to nourish. It was that mind that was like a spoiled stepchild, continuously fed by society, thus overshadowing and smothering the spiritual mind."



Gary Yim/Shutterstock.com

Does our logical, scientific-thinking mind interfere with our spiritual experience? Native American spirituality includes honoring nature.

Source: *Awakening Spirits: A Native American Path to Inner Peace, Healing and Spiritual Growth*, by T. Brown (New York: Berkeley Publishing Group, 1994).

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

to increase our understanding of how the spiritual dimension relates to health. Although we can learn from these studies, we must first consider some of the challenges of researching the spiritual dimension.

Defining Terms

Spirituality and religion are different, yet the terminology often is used interchangeably. This leads to confusion and inaccuracies in interpreting the research on spiritual practices, religious activities, and health outcomes. Researchers do not always agree on the definitions of spiritual terms.

Prayer, for example, has been defined in many ways. Another issue is "dose-response." If a person prays a little, are the results different than if the person prays a lot? Even the definition of spirituality is not universally agreed upon.

What is clear, however, is that the spiritual dimension is a real and important dimension of health and well-being. It is connected to the mental and emotional dimensions. Spiritual health is finding its way into conventional healing modalities such as hypnosis, biofeedback, acupuncture, massage, and reflexology. Many energy and alternative therapies work from a spiritual foundation, with an emphasis on healing the spiritual aspects of the individual along with the emotional and physical. You will learn in Chapter 23, on complementary and alternative health, that these unconventional approaches to health and healing have gained acceptance as Americans seek holistic ways to support their health.

Placebo Power

The second challenge of spirituality research relates to the placebo effect. The term **placebo** describes the positive effects that happen when a person anticipates that he or she will receive help from an intervention; the anticipation produces those outcomes. Estimates of the placebo cure rate range from a low of 15% to a high of 72%. [12] For example, if a person believes a pill will make him better, he may feel better even when he receives an inert substance such as a sugar pill. When someone believes that her prayers for healing will be answered, does the prayer result in healing, or is it possible that merely anticipating that healing will happen is enough to improve the condition?

Does healing result because of the intervention of a higher power or because these people believe so strongly that healing will occur that they succeed in beneficially changing their physiology and biochemistry? The belief that a divine power heals can produce a conditioning effect that alters stress levels, physiologic responses, and immune activity.[12]

Although the placebo effect complicates research, people receive benefits when they anticipate they will receive benefits from an intervention. Theories support the premise that if modern medicine were able to bottle the placebo effects as a drug, it would be one of our most effective cures. When determining the outcomes of spiritual intervention, the placebo effect cannot be discounted.

Variables in Religious, Health, and Lifestyle Research

The third challenge for research on spirituality stems from a large number of variables that may influence study results. A review of the research literature finds a correlation between religious activities and health outcomes. However, as the saying goes, correlation does not equal causation. Most studies suggest that religiosity is beneficial for mental and physical health, stress management, and that it supports a healthy lifestyle.[11] But there may be other variables that contribute, as well.

Recent research suggests that religious people live on average four years longer than their agnostic and atheistic peers. The authors of one study[13] said the difference between practicing worshippers and those who were not part of a religious group could involve a mix of social support, stress-relieving practices, and abstaining from alcohol and drug use.

"The study provides persuasive evidence that there is a relationship between religious participation and how long a person lives," said Baldwin Way, co-author of the study and associate professor of psychology at the Ohio State University.

The research on religiosity and health raises the issue of variables that must be considered when evaluating any form of healing. Do the health benefits that derive from being religious

STRESS BUSTING BEHAVIOR

Ways to Enhance Spiritual Health

In this chapter, you are learning about the qualities of spiritual health. To get you thinking about how this relates to you, consider the following list of ways to enhance spiritual health. Chose the two practices that currently contribute most to your spiritual well-being. Next, chose the two options that you most want to develop to enhance your sense of peace and well-being.

○ Prayer
○ Reflection or quiet listening to one's intuition
○ Communion with nature
○ Enjoyment of music, drama, art, dance
○ Inner dialogue with oneself or with a higher power
○ Loving relationships with others
○ Service to others in need
○ Forgiveness
○ Empathy, compassion, and hope
○ Laughter, joyous expressions
○ Participation in a caring community—a church, a support group, or any group that gives you a feeling of belonging
○ Reading about spiritual growth from any source you find inspiring (the insights of others can help you formulate your own meaning and purpose in life)
○ Quiet time each day for prayer, meditation, or thinking (silence can be healing and help restore a sense of balance)

come from the intervention of a higher power, or are the benefits related to variables such as social support or healthier lifestyle choices that many religions reinforce?

Bottom Line on Research

Scientific methods are not always adequate for exploring concepts such as belief and spirituality. Although we cannot scientifically assess the mechanisms by which higher-power healing occurs, we can observe that changes in perception brought about by religious and spiritual beliefs do alter physiological and psychological health outcomes. Still, people who turn to spirituality for comfort and healing do not need scientific studies to convince them. They believe some things are real, even if they cannot be proven scientifically.

The limitations of research on spirituality tell us that the paths to spiritual well-being are many. We cannot write an exact prescription for spiritual health. The spiritual domain has to do with what we experience privately in our subjective awareness. We must take care not to generalize about such a highly personal perspective. You can consider the information presented in the chapter and assimilate it as you choose. Research and studies can guide your understanding, but only you can choose the path that is right for you.

10.5 Five Qualities of Spiritual Health

Spiritual health refers to the ability to discover and express our primary purpose in life and to learn how to experience love, joy, peace, and fulfillment. It is the experience of helping ourselves and helping others achieve our full potential. It is the connection with God, oneself, others, and nature.[14]

Factors that appear to promote spiritual health include trust, honesty, integrity, altruism, compassion, and service. Spiritually healthy people commune regularly with or have some personal relationship and experience with a higher power or larger reality that transcends their observable physical reality.[14]

There are many expressions of spiritual health, just as there are many aspects of physical or emotional health. The following 5 conditions of spiritual health positively impact stress levels:

1. A sense of meaning and purpose in life.
2. Faith in God or a higher power—however you choose to define it.
3. A feeling of connection to others, and seeing oneself as part of something bigger.
4. Compassion for others.
5. Participation in spiritual behaviors or meaningful spiritual rituals.

We will examine each of these qualities to increase our understanding of how they can help you manage stress.

Meaning and Purpose

> "Please sir, can you tell me which way I ought to go?" asked Alice. "That depends a good deal on where you want to get to," said the cat. "I don't much care," said Alice. "Then it doesn't matter which way you go," said the cat. ". . . so long as I go somewhere," Alice added as an explanation. "Oh, you're sure to do that," said the cat, "if you only walk long enough." (From *Alice in Wonderland,* by Lewis Carroll)

Without some purpose in life, we move aimlessly, and our enthusiasm for life seems lost. Burnout and depression are typical emotions. Finding meaning and discovering our purpose for living brings spiritual growth and peace. Finding meaning serves as a powerful inner drive for personal accomplishment and a stress-relieving sense of contentment that we are on the right path for ourselves.

One of the most influential books on finding meaning in life is *Man's Search for Meaning* by Viktor Frankl, the renowned Viennese psychoanalyst, and survivor of the Holocaust. First published in 1946, this book is still life-changing for many, and millions of copies have been sold. Frankl emphasizes that, although people may be powerless to modify their environment or even their physical condition, they still have the ultimate power to choose their responses and find *inner meaning*, even in the most difficult of circumstances. In short, how one chooses to react throughout life can be the basis of ultimate personal triumph.

Frankl revealed a stress management principle in action. He found that if he could help fellow prisoners believe that their experience—horrendous as it was—nevertheless had some meaning, he could encourage them to keep the will to stay alive. He writes: "There is nothing in the world, I venture to say, that would so effectively help one to survive even the worst conditions, as the knowledge that there is a meaning in one's life … Suffering ceases to be suffering in some way at the moment it finds a meaning."[15]

Learning that even the most challenging times in life can be meaningful can change the experience in a positive direction, as shown in a study on patients with recurring cancer. Researchers in this study found that nearly half of the respondents reported engaging in a search for meaning; the higher a person's sense of purpose, the lower the symptoms of distress.[16] Often, we search for meaning during the most challenging times.

Those who find meaning, even in their suffering, can find peace. Maria's story in the opening vignette showed how she was able to come through a tough time and arise with a new sense of confidence in her ability to handle the inevitable challenges of life. The words of the philosopher Camus describe this concept: "In the depth of winter, I finally learned that within me there lay an invincible summer." Believing that your life, and all that happens in life, has meaning for you strengthens your conviction that you can manage what life brings.

Think about a difficult time in your life when you were able to grow through the experience by finding meaning in your suffering. The key message is this: Peace does not come from a lack of problems and difficulties. Peace comes from knowing that your life

FYI

Survivor's Story

This *USA Today* letter to the editor is a powerful testimonial of how something as devastating as cancer can bring peace and improve the quality of living. The author writes:

I am a five-year breast cancer survivor, and my husband is a two-year prostate cancer survivor. Our lives before cancer were good. We enjoyed a loving family, a beautiful home, and successful careers. But everything was always urgent.

Our post-cancer lives are wonderful. We still have a loving family, a nice home, and rewarding careers, but we have put everything into perspective: We now look at our lives as gifts from God. Every day is special.

Has cancer made our lives better? Absolutely. Are we glad we had cancer? Of course not. The disease lurks in our minds daily. Are we going to let cancer control our lives and get us down? Never. We are working toward becoming better versions of ourselves—physically, mentally, and spiritually. We are enjoying life.

Source: *"Post-Cancer Experience Improved Quality of Living," by J. Dancer,* USA Today, *April 18, 2005, 14A.*

is in harmony with your values and beliefs and from growing and finding meaning in life's disruptions.

Belief in a Higher Power

The term ***spiritual*** suggests a belief in, and devotion to, a higher power beyond the physical realm. This belief in a higher power is the foundation of every major religion and philosophy. Many Christians call this higher power God; Hindus have called it Prana; in Chinese medicine it is called Chi; some Native Americans call it the Great Spirit; Taoists call it the Tao; a philosopher may call it "infinite intelligence"; a psychologist may call it the "collective unconscious" or "superconscious"; a mental health counselor might call it our "higher self"; a quantum physicist might call it the "unified field." Jedi Masters of the *Star Wars* movies call this all-pervading energy the Force. All of these refer to a single unifying connecting spirit as the basis for all things in the universe.

Matthias Clamer/Stone/Getty Images

"When you come to the edge of all the light you know, and are about to step off into the darkness of the unknown, faith is knowing one of two things will happen: There will be something solid to stand on, or you will be taught how to fly." (As quoted by Barbara J. Winter)

Faith is the belief in or commitment to something or someone seen or unseen that helps a person realize a purpose. Faith is belief without evidence. Faith is universal, a part of living, a part of acting, and a part of self-understanding.[17] A robust spiritual faith can promote health and relieve stress by alleviating the stressors of uncertainty and insecurity. Cardiologist and author George Sheehan credits faith with an unmatched power to reduce stress by supplying an inner sense of calm and tranquillity, and a sense that no defeat is final. The result is a sense of lasting security from making a connection with a higher power.[18]

Research with workers in the health and medical fields suggests that faith is an important aspect of the spiritual dimension of health. When healing happens, we are invited to acknowledge that a power higher than our conscious abilities is at work. As an example, when we get in a car accident, and we injure parts of our body, we rush to the emergency room so the medical doctor can initiate healing by resetting bones and stitching cuts. We notice that soon, our body starts its return to a healthy status. There's nothing we can do, consciously, to make all this healing happen. Within a matter of time, however, we get better. We notice that a creative force is behind our healing the same as it is behind all the natural workings of the universe.

The element of control is important to stress management. On the one hand, we have learned that we do have control over a few things that happen in our lives. Feeling in control can be stress-relieving. On the other hand, believing that some things are not in our control is stress-relieving, too. Believing that we can release to a higher power the things that are beyond our control relieves stress by providing a sense of relief and security.

Author Leo Booth says about spirituality: "It is related to the word *spirit*—not a child's concept of a white-sheeted ghost flying in and out of our lives, but an inner attitude that emphasizes energy, creative choice, and a powerful force of living. It is a partnership with a Power greater than us, a co-creatorship with God that allows us to be guided by God and yet take responsibility for our lives."[19]

Reflect on your personal beliefs about a higher power and what affect your ideas have on your stress. Are there aspects of your life that you feel are out of your control? Would releasing control to a higher power result in greater peace for you?

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

Connectedness

As part of her doctoral dissertation, Dr. Judy Howden conducted extensive research on spirituality. She defined spirituality as "the dimension of one's being that is an integrating or unifying factor, and that is manifested through unifying inter-connectedness, purpose and meaning in life, innerness or inner resources, and transcendence." She described **connectedness** as "the feeling of relatedness or attachment to others, a sense of relationship to all of life, a feeling of harmony with self and others, and a feeling of oneness with the universe or a universal element or Universal Being."[20]

Connectedness implies that some aspect of humanity connects each of us. We are one at a deeper level. Wayne Dyer correctly calls it the "uni-verse," the "one song" of which we are all part. The practical application of this awareness becomes apparent. If you are part of me, and I am part of you, I will be more likely to treat you in loving and welcoming ways. If we are made "of the same stuff," as Deepak Chopra has said, why would we want to hurt or cause pain to ourselves? Recognizing our oneness invites us to be more loving and caring with everything and all of the people around us. Functioning in more thoughtful ways toward everyone and everything is stress-relieving.

If we are all connected at the spiritual level, we are all part of the same whole. The Indian poet, philosopher, and Nobel Prize winner Rabindranath Tagore described this connectedness beautifully when he created this poem:

> The same stream of life that runs through my veins night and day runs through the world and dances in rhythmic measures.
>
> It is the same life that shoots in joy through the dust of the earth in numberless blades of grass and breaks into tumultuous waves of leaves and flowers.
>
> It is the same life that is rocked in the ocean-cradle of birth and of death, in ebb and in flow.
>
> I feel my limbs are made glorious by the touch of this world of life. And my pride is from the life-throb of ages dancing in my blood this moment.

Realizing that all we see and can experience in our awareness is part of our own nature, an aspect of ourselves, helps us choose behaviors that tend to enhance rather than destroy everything around us, including the animal and plant kingdoms, as well as fellow human beings. Behind all our different ideologies, cultures, classes, and religions, we are brothers and sisters on this planet.

Do you experience connectedness as a feeling of harmony with yourself and others and a feeling of oneness with the universe? We tend not to give questions like this much thought as we go about our daily life, yet conscious attention can have a significant impact on our thoughts, choices, and contentment with life. Spiritually, knowing that you are part of something much more significant than yourself is comforting.

> Just like a sunbeam can't separate itself from the sun, and a wave can't separate itself from the ocean, we can't separate ourselves from one another. We are all part of a vast sea of love, one indivisible divine mind.
>
> *—Marianne Williamson*

> Our task must be to free ourselves from this prison by widening our circle of compassion to embrace all living creatures and the whole of nature in its beauty.
>
> *—Albert Einstein*

Compassion for Others

His Holiness the Dalai Lama said:

> Love, compassion, and tolerance are necessities, not luxuries. Without them, humanity cannot survive. If you have a particular faith or religion, that is good. But you can survive without it if you have love, compassion, and tolerance. The clear proof of a person's love of God is if that person genuinely shows love to fellow human beings.[21]

Because the spiritual dimension of health transcends the individual, it can be a common bond between individuals. It rises above the individual and goes beyond the limits of the individual. With this common bond, we are motivated to share love, warmth, and compassion with other people. We choose to do unselfish and compassionate things for others. We can put someone else's life and interests before our own. This common bond also prompts us to follow a set of ethical principles and to make a commitment to God or a higher power.[17] Two essential qualities of compassion that have particular relevance to stress management are forgiveness and altruism.

Forgiveness It has been said that forgiveness is a gift you give to yourself, and to the people who love you. We can forgive out of compassion for others, and in the process, we also receive great benefits.

In a series of studies of the Stanford Forgiveness Project, Dr. Fred Luskin studied forgiveness and relationships. He defined **forgiveness** as the experience of psychological peace that occurs when injured people transform their grievances against others.[17] This transformation takes place by taking less personal offense, to attributing less blame to the offender, and by understanding the personal harm that comes from unresolved anger.

Dr. Luskin and Dr. Carl Thoesen conducted a study at Stanford University in which they trained 55 college students to forgive someone who had hurt them. After 6 weeks, the students in the treatment group were significantly less angry, showed greater self-efficacy, were more hopeful, and showed greater emotional self-management than their peers in the control group. When they were evaluated 10 weeks later, they had maintained their improved mental health.

People who refuse to forgive harbor resentment, anger, and bitterness. This negative attitude is harmful both emotionally and physically, because the release of potent stress-related hormones causes our heart rate to increase, muscles to tense, and blood pressure to soar. Mentally replaying situations in which we felt wronged or misunderstood activates the stress response. “But if you don’t practice forgiveness, you might be the one who pays most dearly,” say researchers at the Mayo Clinic. If you’re unforgiving, you might bring anger and bitterness into every relationship; become so wrapped up in the wrong that you can’t enjoy the present; become depressed or anxious; feel that your life lacks meaning or purpose; and lose valuable and enriching connectedness with others.[22]

Researcher Charlotte Witvliet of Hope College in Michigan found that when we mentally replay a hurtful memory or hold a grudge against a person who mistreated or offended us, our body reacts with the stress response. Our brow muscles tense, sweating increases, heart rate and blood pressure rise, and other measures show that the nervous system is on high alert. If we imagine granting forgiveness instead—or simply picture how that person might have felt or what might have contributed to hurtful behavior—our physical stress indicators remain steady. You can’t change the past, but this study shows that changing how you think about past hurt can reduce its impact on you, and the resulting likelihood of stress-related illness.[23]

Psychotherapist Robin Casarjian says:

> Forgiveness is a relationship with life that frees the forgiver from the psychological bondage of chronic fear, hostility, anger, and unhealthy grief. Forgiveness is an attitude that implies that you are willing to accept responsibility for your perceptions, realizing that your perceptions are a choice and not an objective fact.[1]

Forgiveness is a decision and an opportunity not to let past grievances compromise our future by filling our mind with negative thoughts and emotions. It is a skill to be learned.

CULTURE CONNECTION Namaste

The people of India have an interesting way of relating to their understanding of connectedness. When they greet, and when they part, they hold their hands close together in prayer position, bow briefly, and say, “Namaste.” **Namaste** means “I honor the place in you where the entire universe resides. I honor the place in you where lies your love, your light, your truth, and your beauty. I honor the place in you, where, if you are in that place in you, and I am in that place in me, then there is only one of us.”

Tim Graham/Tim Graham Photo Library/Getty Images

Royal Namaste greeting.

When you forgive someone, you make yourself, rather than the person who hurt you, responsible for your future happiness. When we learn to forgive by realizing that our perception is what allows another person to hurt us, and refusing to take offense from others' actions, the consequence is inner peace. This is powerful stress management.

The following list tells us what forgiveness is *not*:[23]

- Pretending everything is fine
- Stuffing away angry or hurt feelings
- Condoning hurtful behavior
- Necessarily reconciling or having contact with an offender
- Something you can be pressured to do
- Forgetting—you can picture a past hurt without dwelling in the emotions

Author Gerald Jampolsky says that if we want to have inner peace in our life, our focus should be forgiveness.

> Through selective forgetting, through taking off the tinted glasses that superimpose the fearful past upon the present, we can begin to know that the truth of Love is forever present and that by perceiving only Love, we can experience happiness. Forgiveness then becomes a process of letting go and overlooking whatever we thought other people might have done to us, or whatever we may think we have done to them.
>
> When we hang on to grievances, we allow our mind to be fed by fear, and we become imprisoned by these distortions. When we see our only function as forgiveness and are willing to practice it consistently by directing our minds to be forgiving, we will find ourselves released and set free. Forgiveness corrects the misperception that we are separate from each other and allows us to experience a sense of unity and "at-one-ment" with each other. The unforgiving mind sees itself as innocent and others as guilty. It thrives on conflict and on being right, and it sees inner peace as its enemy. It perceives everything as separate.[24]

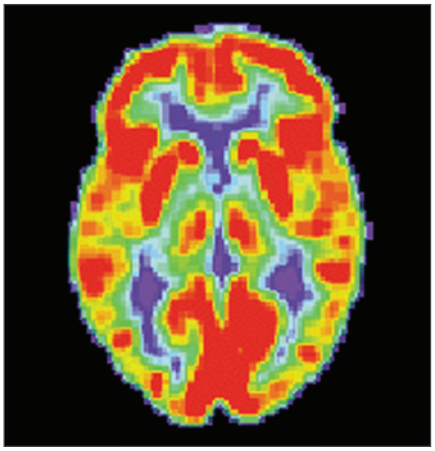
Try this forgiveness exercise: Find a comfortable, quiet place to sit. Take a couple of deep, comfortable breaths. Imagine someone you feel resentment toward or who has hurt you. Start with something small. Invite that person into your heart, noticing any emotions that block his or her entrance. Silently say, "I forgive you," for whatever he or she may have done to hurt you. As you breathe and relax, forgive and let go of the resentment. After a few minutes, imagine letting the person leave, touched by your forgiveness and compassion. You can repeat the exercise with the image of asking someone you may have hurt to forgive you. See yourself thankfully accepting his or her forgiveness.[25]

STRESS STUDIES

The Forgiveness Factor

Research based on data from positron emission tomography is showing that distinct parts of the brain are activated when we contemplate forgiveness rather than revenge or retaliation. Pietro Pietrini, M.D., Ph.D., in the Cognitive Neuroscience Section at the National Institute of Neurological Disorders and Stroke, is assessing the neurobiological response associated with forgiveness and unforgivingness. He is assessing his hypothesis that forgiveness allows a person to overcome a situation that otherwise would be a significant source of stress both mentally and neurobiologically. Forgiveness appears to change the individual's biological homeostatic equilibrium dramatically.

Source: *"Study of the Brain Functional Correlates of Forgiveness in Humans by Using Positron Emission Tomography (PET)," by P. Pietrini, retrieved March 1, 2014, from www.forgiving.org.*



National Institute on Aging/NIH/Science Source

Distinct parts of the brain are activated when we contemplate forgiveness rather than revenge or retaliation.

Altruism How different would the world be if people gave of themselves simply because they wanted to? Not out of a sense of obligation or because they wanted something in return. No hidden motives. No guilty feelings. Just a desire to give for the sake of giving. What could you do to make this kind of world a reality? Commit a random act of kindness. Volunteer your time to improve your community. Give back to the world that gives so much to you. And if it happens to make you feel good, that's all right. Feeling good is the one hidden motive that's acceptable.

Altruism is the act of helping or giving to others without thought of self-benefit. Altruism enhances self-esteem, relieves physical and mental stress, and protects psychological well-being.[26] In an earlier chapter, you learned about altruism as a value. You learned how giving of ourselves helps the giver and the receiver alike. Many colleges offer community service or service-learning courses to provide students with an opportunity to give to their community. Students report increased self-esteem, a belief that they can make a difference, and a more significant commitment to do more volunteer work.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

Many people report that when they do something for someone else without seeking any external reward, they feel inwardly happier and more content. When we take our mind off our troubles as we try to help someone else with theirs, our difficulties are less significant, and our stress is reduced. Ralph Waldo Emerson expressed the benefit of altruism this way, "It is one of the most beautiful compensations of this life that no men can sincerely try to help another without helping himself."

The Random Acts of Kindness movement started when Ann Herbert began promoting the idea of altruism.[27] The idea spread, and one night as a college professor was listening to TV, the phrase "another random act of senseless violence" stuck in his mind. In a moment of inspiration, he decided to assign his human relations students an essay on random acts of "senseless kindness." Students were asked to do something out of the ordinary to help someone who wasn't expecting it and then write about it. One student bought 30 blankets from the Salvation Army and took them to the homeless people who were living under a bridge near his home. Another pulled out of a parking place she had just pulled into and motioned for a motorist who appeared to be frantically in a hurry to take her place. Challenge yourself to commit a random act of kindness today—and in the days to come. The possibilities are endless. Here are a few ideas:

- Write an anonymous thank-you note to an instructor.
- Pick out someone behind you in line at the movies and inform the ticket seller that you want to pay for that moviegoer's ticket. Make sure the person does not know who paid for the ticket.
- Ask a couple who has been married for over 25 years to share with you their 5 best tips for a successful marriage.
- Buy a cold drink for your entire row at the baseball game.
- Ask an older person to tell you a story about his or her youth, his or her favorite song, or how he or she met his or her spouse.
- Drop off a geranium plant and a thank-you note at your local fire station.

> Once you begin to acknowledge random acts of kindness—both the ones you have received and the ones you have given—you can no longer believe that what you do does not matter.
>
> —*Dawna Markova*

Sir John Templeton said, "Know that there is no power in the universe greater than love, and no act more important than loving. **Agape** is the unselfish love that gives of itself and

STRESS STORIES

Random Acts of Kindness

Several years ago, I read a little book called *Random Acts of Kindness.* A random act of kindness (RAK) is a little, out-of-the-ordinary thing we do to help someone who isn't expecting it. It is acting out of love and caring, expecting nothing in return. It feels good. You feel connected to humanity in a way that is hard to explain.

The idea of doing something for someone while expecting nothing in return was not a new idea to me—it was just one of which I needed to be reminded. When I was a young girl, my mom often committed RAKs. Although she didn't call them random acts of kindness, that's what they were. For instance, on May Day each year, we made baskets filled with flowers, cookies, and brightly colored homemade cards. The idea was to sneak up to a neighbor's house and leave a May basket at the door without getting caught. The recipients were not to know who delivered this gift. I still remember the excitement as Mom would wait in the car for my sisters, brother, and me to deliver the basket and race for the car without getting noticed.

Years later, I still remembered how good it felt to help others, so I assigned students in one of my classes to commit two or three RAKs, then report back to the class later in the semester. One student, Nik, related that he had become a RAK addict. He said it felt so good that he found himself planning and committing RAKs nearly every day. He had been planning a Halloween party and decided he could combine fun and altruism. He asked those he invited to the party to bring a couple of cans of food for the local food pantry. Also, they went out in teams with a list of needed supplies prepared by the food pantry. They trick-or-treated for the food pantry and were amazed at the generous response. It was a win/win idea. The people giving the food felt good; the workers at the food pantry were inspired by the good works of the students; the recipients of food appreciated the support and food; and the students felt great about being able to help others in a time of need.

Another student paid for the coffee of the person behind her at the Starbucks drive-up window. When she returned the next day for her daily coffee, the person working at the drive-up window shared with her that the person she bought the coffee for the day prior also decided to pay for the coffee of the person behind him. The kindness spread.

—MH

expects nothing in return. It is the love that grows as you give it to others." Think about how much of the distress between people—and nations—could be eliminated if altruism were a guiding principle for behavior.[28]

In his book *The Ways and Power of Love*, Pitirim Sorokin said, "If unselfish love does not extend over the whole of mankind, if it is confined within one group—a given family, tribe, nation, race, religious denomination, political party, trade union, caste, social class, or any part of humanity—such an in-group altruism tends to generate an out-group antagonism."[29]

The rise in volunteer work worldwide shows that people want to help others. Altruism can point the way to a new future, one in which we are less focused on what we can get *from* others and more focused on what we can contribute *to* their lives. Altruism grows out of compassion for others.

FYI

The World of Doing Good

More than 60 million Americans engage in volunteer efforts. As Winston Churchill said, "We make a living by what we get, we make a life by what we give."

Source: *"Inside the World of Doing Good," by B. Kelly,* U.S. News and World Report, *November 4, 2010.*

TIME TIP

"I spend 15 minutes every morning in prayerful meditation. For me, this is the best possible use of 15 minutes because it helps me make better decisions all day."

—Chris W.

Spiritual Behaviors and Meaningful Spiritual Rituals

The final quality of spiritual health relates to meaningful spiritual practices that we integrate into our lives. Author and psychiatrist Paul Tournier said he used to live a restless life, always racing the clock. But since he began to devote an hour a day to quiet reflection, meditation, and prayer, he has been happier, healthier, and better able to distinguish between priorities, and he has actually accomplished more.[18]

Dr. Kenneth Ferraro, a medical sociologist at Purdue University, examined 1,473 people to determine how their religious practice, or lack of it, had affected their health. Those who prayed regularly, read religious literature, attended church or synagogue, and considered themselves strong and active in their religious faith reported only half the health problems as non-practicing people did.[18]

Numerous studies have found lower rates of depression and less anxiety-related illness among those who are religiously committed. Non-churchgoers have been found to have a suicide rate four times higher than church regulars.[18] Spiritual rituals with a strong connection to peace include prayer and an appreciation of nature.

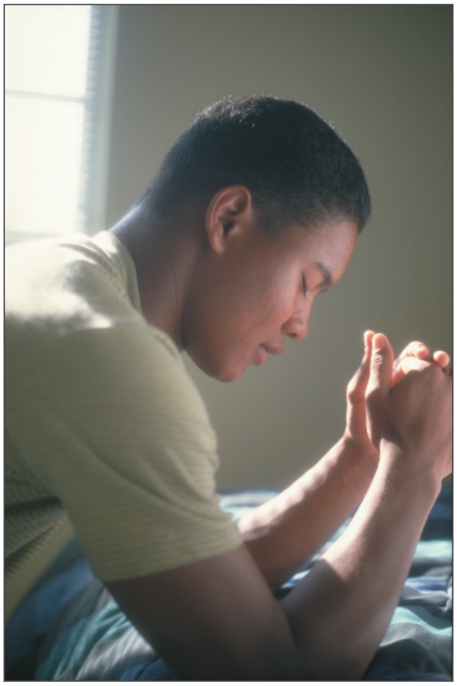
Prayer The ritual of prayer has special relevance in stress reduction. Prayer—communication with a higher power—has meaning for many individuals. The most common form of spiritual ritual, prayer is practiced by religious and nonreligious individuals alike throughout the world.[30] Virtually every culture includes prayer in one form or another, especially during times of stress and at the end of life.[31]

Author, educator, and researcher Dr. Lyn Freeman specializes in the practices of relaxation, meditation, and imagery. Many clients have told her that prayer is the ultimate form of relaxation therapy for them. In prayer, they put their trust in divine power, relax, let go of their fears, and experience great peace. She believes that relaxation is not the end product but, instead, part of the experience. She says:

> Spiritual healers often describe becoming still and entering a deeply relaxed state as part of their healing practice. I hear this from traditional healers in Alaska all the time; they turn inward to "Speak to the Grandfather." Other spiritual practitioners or energy healers talk about "centering" themselves, turning inward, becoming relaxed and calm. Relaxation is a part of all these disciplines.[11]

Prayer has powerful beneficial physiological and psychological effects, as these studies show:

- According to research from Mayo Clinic, people who consider themselves spiritual and use prayer are often better able to cope with daily stress and to heal from illness or addiction.[32]



RF/Corbis

Virtually every culture includes some form of prayer as a meaningful spiritual ritual, especially during times of stress.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

FYI

Frequency of Prayer in America

According to a Pew Research study, 55% of adults say they pray at least daily, and 71% say they pray weekly. Fifty-nine percent of the women said they prayed daily compared to 41% of the men. Of the adults who are ages 16–29, 16% say they pray daily. Thirty-four percent of adults who are ages 30–49 pray daily; 29% of adults who are ages 50–64 say they pray daily, and 21% of adults who are ages 65 and over say they pray daily.

Source: *"2014 Religious Landscape Study," Pew Research Center, retrieved November 13, 2019, from www.pewforum.org/.*

- Among women who were about to undergo breast biopsies, those with the lowest stress hormone levels were those who used faith and prayer to cope with stress.[17]
- Lyn Freeman reported on the findings of numerous research studies on prayer. She summarized that prayer balances stress levels in the face of cardiovascular surgery, loss of a spouse, and chronic and unmanageable pain. The intensity levels of pain, stress, distress, or impairment predicted how likely a patient was to turn to prayer as a source of coping.[11]
- Larry Dossey, a physician of internal medicine, has written extensively on the healing power of prayer. In his book, *Healing Words*, he found more than 100 different studies demonstrating that when a person prays for someone or something else, a real effect takes place for the person or object being prayed for.[33]

The evidence is strong that prayer—as well as other spiritual rituals such as meditation, spending time in nature, music, storytelling, and art—provides comfort for many.

Nature Spending time in nature can provide a profound spiritual experience. The beautiful sky at sunset, a shimmering waterfall, the majestic forest, a quiet stream—these manifestations of nature can remind us that we are part of something much more significant than ourselves. Throughout history, most religious and cultural traditions involve connecting with nature. We discuss nature in more detail in Chapter 14, but a mention is essential here to understand that spending time in nature is a meaningful spiritual practice for many.

Spending time in nature helps restore balance in our life and deepens our connection with a higher power. Many people consider nature to be the most visible manifestation of the spirit.

Ecospirituality **Ecospirituality** is a relationship that an individual experiences personally with the environment. A spiritual view provides a context for living with the Earth and the universe. This relationship arises from personal, inner experience and reflects a developed state of inner harmony.

STRESS STUDIES

Prayer in the Coronary Care Unit

Over 10 months, a computer assigned 393 patients admitted to the coronary care unit at San Francisco General Hospital to either a group that was prayed for by home prayer groups (192 patients) or to a group that was not remembered in prayer (201 patients). The study was a randomized, double-blind experiment in which neither the patients nor the nurses and other healthcare providers knew the group to which the patients had been assigned.*

Researcher Randolph Byrd recruited various religious groups to pray for members of the designated prayed-for group. The prayer groups were given the first names of their patients, as well as a brief description of their diagnosis and condition. They were asked to pray each day but were given no instructions on how to pray. "Each person prayed for many different patients, but each patient in the experiment had between 5 and 7 people praying for him or her," Byrd explained.

The results showed that the prayed-for patients differed in several areas:

1. They were 5 times less likely than the unremembered group to require antibiotics.
2. Fewer members of the prayed-for group developed pneumonia or had cardiac arrests.
3. They were three times less likely to develop pulmonary edema.
4. None of the prayed-for group required endotracheal intubation, while 12 patients in the unremembered group required the support of a mechanical ventilator.
5. Fewer patients in the prayed-for group died (although this difference was not statistically significant).

If the technique being studied had been a new drug or a surgical procedure instead of prayer, it almost certainly would have been heralded as some sort of "breakthrough." Even some hard-boiled skeptics agreed on the significance of Byrd's findings. Dr. William Nolan, who has written a book debunking faith healing, acknowledged, "It sounds like this study will stand up to scrutiny. Maybe we doctors ought to write on our order sheets, 'Pray three times a day.' If it works, it works."**

Source: **"Positive Therapeutic Effects of Intercessory Prayer in a Coronary Care Unit Population," by R. Byrd,* Southern Medical Journal, 81*(7) (1988): 826–829.*

***Cited in* Healing Words: The Power of Prayer and the Practice of Medicine, *by L. Dossey (San Francisco: HarperCollins Publishers, 1993).*

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

STRESS STORIES

Nature's Rhythms

Recently, I spent about a week by myself in a cabin located in the mountains near a ski resort in northern Utah. It was summertime, so I spent a lot of time outdoors walking, hiking, exploring, and enjoying the beauty of the mountains, trees, streams, and wildlife. Since I didn't have service, I couldn't check my e-mail or talk on the phone. There was a television, but I avoided watching it. I used that week to simply "be" without having to do anything in particular.

The most astonishing part of this experience happened when the week was over, and I returned home. I was surprised and almost dismayed at the speedy pace of city life. Everyone seemed to be in such a hurry. Cars rushed everywhere. People spoke too fast. Everything felt far too busy. I wanted to say to everyone, "Slow down. Everything is just fine. Why be in such a rush?"

—MO

Native American religious tradition honors the sacredness of unique places. This expression of a positive relationship with nature is called *nature-centered spirituality*. A connection with nature is not limited to Native Americans. It is found in many traditions worldwide.

Think about how you've been nurtured by nature—the sun gives you light, the water and food sustain your survival, the land gives you a place to live, and the varieties in nature bring joy. Are there things you can do to honor nature and sustain the environment?

Two spiritual rituals that have relevance in managing stress are prayer and an appreciation for nature. Think about other rituals that provide emotional and spiritual renewal in your daily life. Now that you have learned about the 5 qualities of spiritual health, you will learn how to apply spirituality in your daily life to reduce stress and enhance wellness.

> At a certain point, you say to the woods, to the sea, to the mountains, the world, "Now I am ready. Now I will stop and be wholly attentive." You empty yourself and wait, listening.
>
> —*Annie Dillard*

10.6 An Action Plan for Stress Management Through Spiritual Wellness

Surveys show that over 50% of students place strong importance on "integrating spirituality into my life." What about you? Where should you begin in your quest to manage stress through spiritual wellness? How do you put this knowledge into action? The challenge may seem daunting. Specific tools to reduce stress are tangible, for example, talking with friends, managing your money, and exercising more. But as you have learned in this chapter, there is another tool for helping you manage life challenges that can be just as beneficial—embracing your spirituality. Although wellness of spirit comes to people in diverse ways and spiritual growth can take many paths, this growth starts with a single step:

1. Begin by defining what spirituality means to you.
2. Next, close your eyes and take a few minutes to reflect on some spiritual moments in your life—times when you were keenly aware of your spirituality. As clearly as you can, reflect on these spiritual experiences.
3. Based on your definition of spirituality, reflect on how spirituality relates to stress in your life. Examine the values that guide your life. Do you see a relationship between your spiritual beliefs and the values you prioritized in Chapter 9? Spirituality determines values, and values determine actions. When our actions are consistent with our values and beliefs, the outcome is balance, peace, and fulfillment.
4. Complete the Stress Management Activity, Spiritual Wellness Assessment and Response, at the end of this chapter, to guide you in your action plan for stress management through spiritual wellness.

10.7 Conclusion

The path to spiritual health is an individual one. The one that works for you is the one you should follow. Based on your cultural beliefs, your experiences in life, and your values, only you can decide on the path that will lead to greater peace. Spiritual well-being is not

Jake Wyman/The Image Bank/Getty Images

I go to nature to be soothed and healed and to have my senses put in tune once more. (John Burroughs)

an endpoint or a prescribed set of activities to do a single time. Spiritual health involves a lifetime of deliberate choices and an intentional inner focus on matters of the spirit. Making choices that fulfill your purpose in life will bring the ultimate stress-relievers—peace, joy, and love—into your life. Peace comes from the careful balance in body, mind, and spirit.

The intent of the chapter is not to support or promote any specific religious or spiritual perspective but, instead, for you to reflect on the role of spirituality in your life. Commitment to a whole-person way of living prevents and relieves stress. The spiritual dimension of health acts as the force that unifies the other aspects of health: intellectual, emotional, physical, and social.

At the beginning of this chapter, you learned that discovering the contemplative, spiritual life requires not so much a radical change in lifestyle as a shift in awareness—a personal change. Spirituality focuses on inner balance, rather than on the outward circumstances of our lives. Take a minute to think about what this means for you. This internal stability enables you to be a self-fulfilling person despite all life's changes and challenges. You can find meaning and therefore grow, from even the most challenging times in life. Spiritual health is the quality of existence in which you are at peace with yourself and in harmony with the environment.

ACTIVITY

10.1 Spiritual Wellness Assessment and Response

I. Spiritual Wellness Assessment

Instructions: For each item below, assign one of the following: S = I am doing *superior* in this area of my spiritual life; SS = I am doing *so-so* or okay in this area, but I could improve; and NS = I *need strengthening* in this area (an area of growth for me)

________ I have a deeply held belief system or personal theology.
________ I have faith in a higher power.
________ My faith gives meaning to the experiences and relations in my life.
________ Even during difficult times, I have a sense of hope and peace.
________ My spiritual beliefs help me remain calm and steady during times of stress.
________ I feel a connection to the people and the world around me.
________ I can forgive people, even when I think they have wronged me.
________ I seek time with nature, and I reflect on how nature contributes to my quality of life.
________ I find comfort in the practice of spiritual rituals (prayer, meditation, music).
________ I feel loved.
________ I can express my love for others freely.
________ I respect the diversity of spiritual expression and am tolerant of those whose beliefs differ from my own.
________ I can clearly articulate the meaning and purpose of my life.
________ My inner strength is related to my belief in a higher power.
________ I take time to be of service to others and enjoy doing so.
________ I feel a sense of harmony and inner peace.
________ I think my life is balanced.
________ I feel responsible and am actively involved in preserving the environment.
________ I see myself as a person of worth and feel comfortable with my own strengths and limitations.
________ The way I live my life reflects what I value most.

FIGURE 10.1
Spiritual Wellness Assessment

Source: Stress Less: Four Weeks to More Abundant Living, *by M. Hesson (Nashville, TN: Abingdon Press, 1999).*

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

II. Assessment Response Questions

The Spiritual Wellness Assessment has no right or wrong responses. It is intended to help you find areas in which you may decide to do some spiritual growth work. Continue to practice your positive spiritual habits while you look for new ways to grow spiritually. Reflect on your response to the statements in the assessment as you answer the following questions to help you with your spiritual growth:

1. What do you do currently that helps you feel spiritually healthy?
2. When all the surface layers of your life are peeled away, what do you believe makes up the core of your life—your purpose for being?
3. List two items from the Spiritual Wellness Assessment that you rated with an *S* and that you believe are most important for your spiritual well-being. Why are these items so important to you?
4. Of the items you rated *SS* or *NS*, which two do you think are most important for your spiritual growth?
5. What are three specific things you can do to grow spiritually for greater fulfillment and peace in your life?

Key Points

- Human spirituality is at the heart of stress management. People with a deep sense of spirituality view life differently than those who do not.
- Discovering the contemplative, spiritual life requires not so much a radical change in lifestyle as a shift in awareness.
- We each have a spiritual dimension, a quality that goes beyond religious affiliation that strives for inspiration, reverence, awe, meaning, and purpose, even in those who do not believe in any God. The spiritual dimension seeks harmony with the universe, strives for answers about the infinite, and comes into focus as a sustaining power when the person faces emotional stress, physical illness, or death.
- Spirituality is a much broader concept than religiosity.
- Scientific methods are not always adequate for exploring concepts such as faith and spirituality.
- Five qualities of spiritual health are:
  1. A sense of peace, meaning, and purpose in life.
  2. Faith in God or a higher power, however you choose to define it.
  3. Participation in spiritual behaviors or meaningful spiritual rituals.
  4. Compassion for others.
  5. Feeling connected to others and perceiving the self as part of something bigger.
- Prayer is a ritual that can have relevance in reducing stress.
- Appreciation of nature can be a spiritual experience.
- You can enhance spiritual health in many ways. Assessing your spiritual health and developing an individualized plan will help you make choices that bring peace.

Key Terms

spiritual dimension
spirituality
religiosity
placebo
spiritual
faith
connectedness
forgiveness
namaste
altruism
agape
ecospirituality

References

1. *Mind/Body Health* (5th ed.), by K. Karren, N. Lee Smith, & K. Gordon (Glenview, IL: Pearson, 2014).
2. "Discovering the Mystic within . . . at the Beach," by C. Smith, *The Anchorage, 4*(2) (2003): 4.
3. "The Spirituality of Academic Physicians: An Ethnography of a Scripture-based Group in an Academic Medical Center," by C. Messikomer & W. De Craemer, *Academic Medicine, 77*(6) (2002): 562–573.

4. *The Book of Joy: Lasting Happiness in a Changing World,* by Dalai Lama & D. Tutu (New York: Penguin Random House, LLC, 2016); *The Power of Now,* by E. Tolle (Novato, CA: Namaste Publishing, 2004); *Super Attractor: Methods for Manifesting a Life beyond Your Wildest Dreams,* by G. Bernstein (New York: Carlsbad, CA: Hay House, Inc., 2019); *Dying to Be Me,* by A. Moorjani (Carlsbad, CA: Hay House, Inc., 2014); *Infinite Potential: The Greatest Works of Neville Goddard*, by N. Goddard & M. Horowitz (St. Martin's Publishing Group, 2019).
5. "Religious and Spiritual Factors in Resilience," by D. W. Foy, K. D. Drescher, & P. J. Watson, *Resilience and Mental Health: Challenges Across the Lifespan 90*(102) (2011).
6. *Fundamentals of Nursing* (3rd ed.), by H. Harkreader, M. Hogan, & M. Thobaben (Philadelphia: Elsevier/Saunders, 2007).
7. "Evolutionary Concept Analysis of Spirituality," by I. S. Ko, S. Y. Choi, & J. S. Kim, *Journal of Korean Academy of Nursing, 47*(2) (2017): 242–256.
8. "Spirituality and Healing," by L. Skokan & D. Bader, *Health Progress, 81*(1) (2000): 1–8.
9. *Religion in China: Survival and Revival under Communist Rule,* by F. Yang (Oxford Scholarship Online, 2011).
10. "Influence of Religious Aspects and Personal Beliefs on Psychological Behavior," by A. Agorastos, C. Demiralay, & C. G. Huber, *Psychology Research & Behavior Management, 7* (2014): 93–101.
11. *Mosby's Complementary and Alternative Medicine: A Research-based Approach* (3rd ed.), by L. Freeman (St. Louis: Mosby, 2009).
12. *Brain Sense: The Science of the Senses and How We Process the World Around Us*, by F. Brynie (New York: Amacon Books, 2010).
13. "Does Religion Stave Off the Grave? Religious Affiliation in One's Obituary and Longevity," by L. E. Walace, R. Anthony, & C. M. End, *Social Psychology and Personality Science, 10*(5) (2018).
14. "Explanatory Definition of the Concept of Spiritual Health: A Qualitative Study in Iran," by A. Ghaderi, S. M. Tabatabaei, S. Nedgat, M. Javadi, & B. Larijani, *Journal of Medical Ethics and History of Medicine, 11* (2018):3.
15. *Man's Search for Meaning* (revised), by V. Frankl (New York: Pocket Books, 1984).
16. *The Best Alternative Medicine*, by K. Pelletier (New York: Simon and Schuster, 2000).
17. *Life Maps: Conversations on the Journey of Faith*, by J. Fowler & S. Keen (Waco, TX: Word Books, 1985).
18. "The Surprise Key to Stress Management," by D. Nelson, *Vibrant Life, 14*(5) (1998): 24.
19. *When God Becomes a Drug*, by L. Booth (East Rutherford, NJ: G.P. Putman, 1991).
20. "Development and Psychometric Characteristics of the Spirituality Assessment Scale," by J. W. Howden, unpublished doctoral dissertation, Texas Women's University, Denton.
21. "Love, Compassion and Tolerance," Dalai Lama, cited in *For the Love of God: New Writings by Spiritual and Psychological Leader,* by B. Shield & R. Carlson (San Rafael, CA: New World Library, 1990).
22. "Forgiveness: Letting Go of Grudges and Bitterness," by Mayo Clinic Staff, retrieved November 30, 2019, from https://www.mayoclinic.org/.
23. "Embodied Forgiveness: Empirical Studies of Cognitive, Emotional, and Physical Dimensions of Forgiveness-Related Responses," by C. Witvliet, retrieved April 20, 2005, from http://www.forgiving.org.
24. *Love Is Letting Go of Fear*, by G. Jampolsky (Berkeley, CA: Celestial Arts, 1979).
25. "A 10-Minute Guided Mindfulness Meditation to Foster Forgiveness," by M. Bertin, retrieved November 30, 2019, from https://www.mindful.org/.
26. *An Invitation to Health* (16th ed.), by Dianne Hales (Stamford, CT: Cengage Learning, 2015).
27. *Random Acts of Kindness,* by D. Markova and editors of Conari Press (Berkeley, CA: Conari Press, 1993).
28. *Agape Love: A Tradition Found in Eight World Religions,* by J. Templeton (West Conshohocken, PA: Templeton Foundation Press, 1999).
29. *The Ways and Power of Love: Types, Factors, and Techniques of Moral Transformation*, by P. Sorokin (West Conshohocken, PA: Templeton Foundation Press, 2002).
30. *Integrative Health: A Holistic Approach for Health Professionals*, by C. Young & C. Koopsen (Boston: Jones and Bartlett Publishers, 2009).
31. "Is There a Role for Prayer and Spirituality in Health Care?" by D. O'Hara, *Medical Clinics of North America, 86*(1) (2002): 33–46.
32. *Mayo Clinic Book of Alternative Medicine* (2nd ed.), by B. Bauer (New York: Time Inc., 2010).
33. *Healing Words: The Power of Prayer and the Practice of Medicine*, by L. Dossey (San Francisco: HarperCollins Publishers, 1993).

chapter
11

Time and Life Management

Photodisc/Getty Images

Dost thou love life, then do not squander time, for that is the stuff that life is made of.

—*Ben Franklin*

No matter how much time I spend on my schoolwork, I can't seem to catch up. What can I do?

What is the best system to help me get organized so I can get the most important things done?

How can I find time to have some fun? All I do is work and study.

I'm a "go-with-the-flow" type person. A daily to-do list seems too rigid for me. Are other options available for managing time that fit my personality better?

I am a major procrastinator! Can you help me?

Learning Objectives

Study of this chapter will enable you to do the following:

11.1 Select a time management technique that will work for you.

11.2 Identify time wasters.

11.3 Prioritize to gain control of your time.

11.4 Overcome procrastination.

11.5 Reduce your stress by being more efficient and effective.

Real People, Real Stories

Students share their experience "In planning out my day and arranging things in order of priority, I found that I was getting a lot more of the important things done and being controlled less by things that seemed urgent. I was more prepared when it came time to put out fires, and because my priorities were written down, I delegated many of the urgent things to others. My stress levels were much lower because I had a better idea of the things I wanted to get done. I accomplished a lot more in less time. I had a more peaceful relaxation time because my other concerns were written and scheduled. Before, I usually laid in bed thinking about all the things I had to do the next day, but by making a list beforehand I slept better, and my day flowed better. When my life is organized, my peacefulness level rises. I'm happier and less of a grouch. I'm a better student, a better husband, and a better father. When I'm organized, I tend to get off track less and don't get upset over the small stuff."

—*Jeff S.*

***

"I'm a very organized person. I like to have things laid out so I can prioritize and plan. Prioritizing my time was a perfect assignment for that! It especially helped me keep my homework done. Being able to assign an A, B, or C helped me not to be so stressed about getting everything done at once, too! Concerning my time, I thought I efficiently used the little time I had. I always feel better when I get something done, and this was a no-fail way of being productive. I had my version of time management, but after reading this chapter and practicing these ideas daily, I was able to lay things out better and become more familiar with prioritizing. I was able to use my time in a good way, and I still had some time left over to do something fun!"

—*Karen M.*

11.1 Time and Life Management

Time management is like dieting. We hope for a magic pill that will make our time management struggles magically disappear. The belief that we don't have enough time is one of life's deceptions. We all have exactly 60 minutes in every hour, 24 hours in every day, and 168 hours in every week. No one gets more, and no one gets less. So, time management is really about managing our self and our life.

In this chapter, you will learn how to reduce your stress using methods that help you gain control over how you use your time. First, we will look at 3 time management techniques. Then we will offer ideas for how to overcome procrastination and end time wasters, which will put you on the path to finding balance in your everyday life.

> We live in deeds, not years; in thoughts, not breaths; in feelings, not in figures on a dial. We should count time by heart throbs.
>
> —*Aristotle*

11.2 What Is Time Management?

Time is the medium through which we live our lives. Development, maturation, learning, wisdom, and serenity are critically related to the passage of time. Time is an omnipresent factor in our lives.[1] How we choose to spend our time determines the level of satisfaction we experience.

Time is the occurrence of all the events of our lives in sequence, one after another. Getting out of bed is an event; walking to answer the phone, getting into the car, and everything else we do in a day is events. Albert Einstein once said that time is what keeps one thing after another from all happening at the same time. **Management** is the art or manner of controlling. A working definition of **time management,** then, is the art or manner of controlling the sequence of events in our lives.

11.3 Time and Stress

Psychologists tell us that our stress levels are related to how much control we feel over events and situations in our life. As our sense of control declines, our stress levels rise. When we sense that we control something, we typically experience feelings of calmness, security, and inner peace. Time is an area of life in which we often feel we have lost control. Gaining control over how we use our time is vital to managing stress. For example, research agrees that time management has a positive impact on employees' mental health, and that this may be attributable primarily to enhanced feelings of control over time.[2]

Women and men rate themselves differently in terms of time management and stress levels. In a national study of college students, women were more likely to rate their time management skills as "above average," but they also were twice as likely as men to say that they felt frequently overwhelmed by all they had to do. According to Linda Sax, UCLA associate professor of education and director of the survey, women's greater tendency to feel overwhelmed may reflect differences in how women and men spend their time. Perhaps because they participate more frequently in stress-buffering activities, men were more likely than women to feel less stress and to rate their emotional health as above average. Men also were less likely than women to report that they feel frequently or occasionally depressed.[3]

Adults and children, college students and employees, women and men; many share the familiar feeling that they are too busy. We feel stressed because we believe we have too much to do and not enough time to do it. So, how can we control our time to reduce our stress? Careful planning and time management techniques are the answer.

STRESS STUDIES

Time Management Training Is Good for Mind and Body

Anxiety and depression seriously affect sleep quality and mental health of perimenopausal women. Can time management training help lessen anxiety and depression and improve the sleep quality of perimenopausal women? Apparently so. An experimental group of 58 women took part in 12 two-hour time management training sessions over 6 months while the control group of 56 women did not participate in any time management training.

Before the intervention, both groups were evaluated for depression, anxiety, and quality of sleep, at which time both groups had the same scores. After the intervention, the anxiety levels of the experimental group had decreased significantly compared to the control group. The experimental group also had a greater decrease in depression than the control group. The group that received the time management training improved in sleep quality compared to the control group. It appears that time management training helps us feel better and sleep better, too.

Source: *"Effect of Time Management Training on Anxiety, Depression, and Sleep Quality," by P. Wang, X. Wang,* Iranian Journal of Public Health, 47*(12) (2018): 1822–1831.*

11.4 Planning for Control

How do you get control of your time and your life? You plan. **Planning** happens when you bring future events into the present and apply appropriate control. Planning means figuring out in advance how you would like something to happen in the future. Once you master the skill of planning, it frees you from the underlying feeling that your life is out of control.

Why do we sometimes avoid planning? Maybe we think that planning inhibits our spontaneity, keeps us from going with the flow, takes too much time, or doesn't allow for interruptions and is restricting. Or maybe we have no idea how to plan in a way that makes any sense, or we lack the discipline to develop and follow a plan.

Pareto's Law

A principle that can help you plan was developed by Italian economist and political sociologist Vilfredo Pareto (1848–1923). He devised the law of the "trivial many and the critical few," better known as **Pareto's law,** or the 80:20 rule. This rule says that, in many activities, 80% of the potential value can be achieved from just 20% of the effort, and that one can spend the remaining 80% of effort for little return. Even though Pareto lived a century ago, his 80:20 rule, in its many forms, is accepted as an almost universal truth.

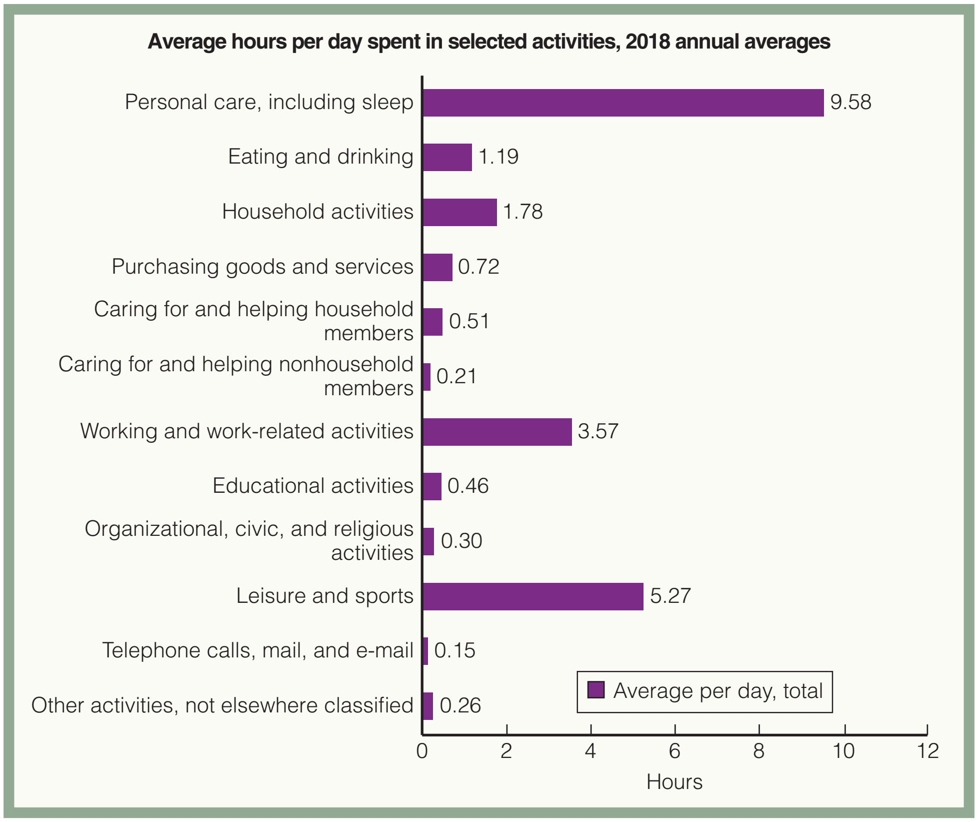
The reverse is also true: Things that take up 80% of your time and resources will produce only 20% of your results. Let's say you have a paper that's due tomorrow, so the pressure is on. You plan to complete the assignment in three hours, and tonight is the night. You gather your assignment instructions and related materials, tell your friends to leave you alone, and turn on your computer. Your phone lets you know your friends are sending you texts and Instagram messages, so you decide to see what's happening. Half an hour later, you're still on your phone but you're determined to focus on your paper so you put away your phone. You connect to Google Scholar

goodluz/Shutterstock.com

Most people say they feel rushed, without enough time.

FIGURE 11.1
How Men and Women Spend Their Time

Source: *From "Average Hours per Day Spent in Selected Activities by Sex and Day," Bureau of Labor Statistics, retrieved June 11, 2019, from https://www.bls.gov/charts/american-time-use/activity-by-sex.htm.*



> I get up every morning determined to both change the world and to have one hell of a good time. Sometimes, this makes planning the day difficult.
>
> —*E. B. White*

and begin your keyword search. You scroll through some abstracts that might relate to your paper. You come across a link to an interesting website, which leads to another, and then another, and an hour later, you still haven't written a single word of your paper. Does this sound familiar? Concentrating your efforts on key activities that get results increases your efficiency and decreases your stress.

The universality of Pareto's law can assist you in planning how you spend your time. You have the power to set the important priorities that will mean the difference between failure, survival, and success. Think about how this applies to you. This chapter will help you determine the activities that will yield the most benefits as you work to achieve what you value.

Methods of Time Management

The crucial element of nearly every useful and effective time management system is planning and executing around our priorities. Most methods begin by asking these 4 crucial questions:

1. What are my highest priorities? (What is most important to me?)
2. Of my priorities, which do I value the most?
3. What can I do about my highest priorities in the days and weeks to come?
4. When, during today and this week, will I do these things?

FYI

Maybe Others, but Surely Not Me

75%—Percentage of time that is taken up by socializing, recreation, and sleeping during American students' first 2 years of college; only 7% is used for studying.

Source: Time, 177*(4), January 31, 2011: 15.*

This chapter introduces you to 3 effective methods to help you answer these questions so you can take control of the events in your life.

1. ABC123 Prioritized Planning
2. Quadrant Planning
3. Lifebalance

CULTURE CONNECTION What Time Is It?

Time is a theoretical concept full of cultural value judgments. Anthropologist E. T. Hall identified societies as either based on **monochromic time** (M-time), such as Northern and Western European, European American, and "westernized" cultures, or based on **polychromic time** (P-time), such as Middle Eastern, Latin American, and Native American cultures.

Monochronic time is linear. Events are scheduled one at a time, with one event following another. In a monochronic culture, this type of schedule may take precedence over interpersonal relationships. These cultures emphasize schedules, punctuality, and preciseness. They also emphasize "doing" things. They are cultures that value productivity, that value getting things done "on time." They view time as something that can be lost, killed, or wasted—or, conversely, as something that can, or should, be managed and planned, and used efficiently.

Polychronic time, by contrast, is characterized by several events happening simultaneously. Also, according to Hall's theory, interpersonal relationships are highly valued in polychronic cultures. Time is less tangible, and the emphasis is placed on the involvement of people and the completion of transactions rather than on schedules. Multitasking is valued. Examples of polychronic cultures are Latin American, African, Arab, and Native American cultures. Their perception of time is considered to be more connected to "natural rhythms" and to "the earth" and "the seasons." This makes sense when we consider that natural events can occur spontaneously, sporadically, or concurrently.

Polychronic cultures view time as being more flexible. Because life isn't entirely predictable, scheduling and being precise are seen as simply not that important. Also, relationships with people are valued more than staying on schedule. More value is placed on "being" than on "doing."

Different cultural perceptions of time can lead to conflict, especially in the business world. The idea of being late versus on time for a meeting, for example, may differ widely between an American businessperson and a Brazilian; the American businessperson might be far less tolerant of a Brazilian's late arrival. However, the Brazilian businessperson may be offended by an American's insistence on punctuality or on getting right down to business; the Brazilian would generally prefer to finish talking with colleagues first, and would not want to cut a conversation short in order to make an appointment.

Understanding the relationship between time, ethnicity, gender, and age can increase our sensitivity to different perspectives, and at the same time, raise our awareness of factors that affect our attitudes.

Source: "Everything Is About Time: Does It Have the Same Meaning All Over the World?" by G. Duranti & O. Di Prata, paper presented at PMI Global Congress (2009).

Because we are all different, no time management system works equally well for everyone. As you will see, these 3 methods have similarities and differences. In reading them, you may find yourself attracted to 1 method more than the others. You also might find ways to modify the methods according to your own circumstances and preferences. Each is effective in helping people gain control over their lives and, as a result, significantly reducing their stress.

11.5 ABC123 Prioritized Planning

A simple yet powerful method of managing the events of our lives involves moving beyond the traditional to-do list. Alan Lakein[4] introduced us to the **ABC123 Prioritized Planning** method. The emphasis of this method is to move out of the mode of managing emergencies and putting out fires and into the pattern of doing the most important things. Here are the steps to the ABC123 Prioritized Planning method.

First, dedicate 15 minutes each day to thoughtful planning. You could do this either at the beginning of the day or the evening before the next day. During the 15-minute daily planning, follow this 3-phase procedure:

Phase I: Make a List

Make a list of everything you want to do today. At this point, don't assign any value to anything on the list; simply jot down on a

FYI

Tyranny of the Urgent

We tend to do urgent things at the expense of important things. For example, most people would agree that spending time developing a relationship is important. Spending quality time with a friend or a family member is vital to the relationship. Yet, the amount of time that parents spend talking to each other or their children is small compared to the time they spend doing seemingly more urgent but far less important items of the day, such as watching a favorite TV program or checking social media. Charles Hummel, president of Barrington University, had this to say about the difference between the urgent and the important task:

> The important or vital task rarely must be done today or even this week. The urgent task calls for instant action. The momentary appeal of these tasks seems irresistible, and they devour our energy. But in the light of time's perspective, their deceptive prominence fades. With a sense of loss, we recall the vital task we have pushed aside; we realize we have become slaves to the tyranny of the urgent.[5]

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

piece of paper or in a planner the things you want to and need to do today. At this point, it looks much like a traditional to-do list. It may be a lengthy list, but that's okay.

Bill Robinson/The Image Bank/Getty Images

Spending your time on what is truly important can contribute to your joy and happiness.

Phase II: Assign a Value to Each Item on the List, Using ABC

Put an "A" next to each item on your list that *must* be done today. These are the vital things that are most important to you. "Important" is not the same as "urgent," and you must clarify the difference. Urgent items shout for immediate action. Often, these urgent things are not necessarily important, but they have the appearance of needing to be done *right now*. Answering your phone or checking e-mail may seem urgent but often lacks relative importance.

Examples of "A" priority items might include studying for a test that will take place in two or three days, putting some gas in the car if you're running on empty, going to the gym to work out, taking your daughter to a movie, spending some quiet time meditating, or beginning research for a paper that is due in three weeks. These are all important items, though they may not be screaming at you to be done "right now." These important but not necessarily urgent items *must* get on your list as "A" items.

Next, place a "B" beside each item that should be done today. These are items with *some importance* to you. An example of a "B" item might be deciding on a topic for a paper that is due in six weeks, filling your car with gas when it still has a quarter of a tank left, or purchasing a birthday gift for a friend whose birthday is two weeks away.

The items on your list that will get a "C" are the tasks that have *very little importance* to you. These items could be done but won't suffer at all if they aren't. Examples of "C" items might be washing your car, going to a store to buy a shirt, reading the newspaper, or cleaning out the garage.

Mark shared in class that he realized he had let a "C" item replace an "A" item the day before. He said, "My three-year-old daughter, Annie, asked me to read her a bedtime story last night. I promised I would as soon as I finished reading the newspaper. When I finished the paper and went into Annie's room, I found her sound asleep. I felt regret when I realized I had let something as unimportant as reading the paper come before spending time with Annie at the end of the day."

The value you give items change as the events in your life change. What was once a "C" item, such as cleaning the garage, might become a "B" item if you no longer can get your car into the garage. The level of importance of working on a research paper changes as the due date for the paper approaches. You choose the relative importance of every item on your list based on how you currently perceive them.

Phase III: Prioritize Again, Using 123

In Phase III of the planning process, give a numerical value to each item on the list based on its relative importance to you. First, move through the "A" items and compare each one. Ask yourself which of these very important items is *the most important of all*. That item gets a "1" next to the "A," so it becomes "A1" on your list. Rank each A item, then continue to the Bs and Cs.

Table 11.1 is an example of how your planning list might appear after following through on each of the 3 phases. The action plan for the day would begin with the item that received the A1, followed by A2, and on through the A items. When the A items are completed, you continue to B1, B2, and so on.

TABLE 11.1 Example of Prioritized Daily Planning

ABC	Task List
B4	Schedule appointment for a haircut
A5	Get snacks for tonight's party
A3	Go to the gym to work out
C3	Check e-mail
B3	Send thank-you letter for last week's job interview
C4	Go to the mall to look for new jeans
C5	Play Nintendo with Eric
A2	Go to eye doctor appointment
A4	Meditate for 15 minutes
A1	Study for tomorrow's math test
B2	Study for next week's history test
C2	Make appointment with a counselor to decide on a major at school
B1	Call players on the intramural team about next week's game
C1	Write a letter to parents

You have just decided on the sequence in which you will do the things you want to do, based on their relative value to you. You have determined the order of the events of your day. You have begun to gain control because you have put your most important objectives first.

A word of caution if you want to make this work effectively: The human tendency is to skip the most valuable and important things (the "A" items on the list) and move to items that are easier, more fun, or less demanding (the "B" and "C" items on the list). Doing so has consequences. First, and most notably, many of your important items will turn into urgent items. If you delay working on the research paper until a couple of days before it is due, you are in panic mode. The quality of your paper suffers, and you are less likely to enjoy working on it. We call this "putting out the fires." It is the urgency mode. Stress levels skyrocket when we postpone the most important things.

The other consequence of doing the "B" and "C" items first and putting off the "A" items is inner chaos. As we discussed in Chapter 9 on values, when we do the things that are most important to us, we experience inner peace because we have aligned what we do with what we value. When we don't do the things that align with what we value, we lose our inner peace.

On most days you won't finish everything on your list. You rarely will. Classes, meetings, family responsibilities, work obligations, and interruptions interfere with your plan. The real value of the ABC123 system becomes clear when we do have periods of free time and can choose among several activities. During those times in the day, we can go to the top of our list, our A1 item, and work from there.

This method of planning can be an effective way to get some control over the events of life, especially if you currently aren't doing anything to plan your days and often feel overwhelmed. By using the ABC123 method, you can gain back some of that control.

Tip: A simple adaptation of the ABC123 method is to start each day by making a list of the 6 most important things you want to do that day. Decide which item is the most important, and when you finish, continue with the next. This simple approach can free your mind to focus on what is most important to you.

STRESS STUDIES

Time Management Is Stress Management

To help determine if time management really reduces stress, researchers recruited an experimental group to a time management program focusing on several major components that included prioritizing and goal setting; strategy development; structuring the workday and using implementation; monitoring; and behavior analysis, with the identification of stimuli, reactions, and consequences.

The results showed that compared to a control group that received no training, the group that received the time management training reported significantly less perceived stress, a greater sense of well-being, and increased perceived control of time. The researchers concluded that "Time management techniques such as prioritizing, structuring the workday, and monitoring increase one's feeling of control, and that increase might lead to less stress."

Source: *"Time Management Training and Perceived Control of Time at Work," by Alexander Häfner & Armin Stock.* Journal of Psychology 144.5 *(2010): 429–447.*

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

11.6 Quadrant Planning

The second method of time and life management, **Quadrant Planning,** is another popular time management system. This method was developed by Stephen Covey in his bestselling book, *The 7 Habits of Highly Effective People.*[6] Quadrant Planning relates to the habit of highly successful people called "First Things First."

First Things First

Quadrant Planning begins with a long-term approach to time management by inviting you to answer some questions. The answers to these questions guide you in your daily decisions. Covey believes that traditional time management methods don't bring peace and fulfilment because we don't put the most important things (first things) first. He compels us to assess what our first things are with some thoughtful questions:

- Are the things that are less important in your life receiving the most attention?
- Are too many good things getting in the way of your best?
- Are you making the tough decision to choose the best over the good?
- What activities, if you knew you did superbly and consistently, would have a significant positive impact on your life?
- How many people, on their deathbed, wish they had spent more time at the office?

We ask ourselves first, "Am I doing the right things?" Next we ask, "Am I doing things right?" When we do this, we put our lives in a direction that is much more fulfilling and productive.

Urgency versus Importance

The key to doing first things first is to distinguish again between urgent and important. We may be busy working as hard as we can only to find that at the end of the day, we feel unfulfilled. We did the **urgent** things, the ones demanding our attention now, before doing the **important,** the things that would make a difference in the long-term. Urgency controls our lives. The only way to truly master our time is to organize our schedule each day to spend most of our time doing things that are important but not necessarily urgent.

In the Activity Matrix, Figure 11.2, Quadrant 1 activities will demand our attention at times, but if urgency is what drives you, you may be missing the important things. Quadrant

FIGURE 11.2
Activity Matrix

Quadrant 1: Urgent and Important	Quadrant 2: Important, Not Urgent
• Crises • Pressing problems • Deadline-driven projects • Urgent meetings • Important things on which we have procrastinated	• Preparation • Prevention • Values clarification • Planning • Relationship building • True recreation • Empowerment
Quadrant 3: Urgent, but Not Important • Interruptions, some phone calls • Some mail, some reports • Some meetings • Many proximate, pressing matters • Many popular activities	**Quadrant 4: Not Urgent, Not Important** • Trivia • Busywork • Some phone calls • Time wasters • "Escape" activities

2 activities, the important activities, should be our first things—the things on which we focus most of our time and energy.

Consider this analogy: Imagine a big jar sitting on a table, and next to the jar is a pile of rocks of varying sizes, including a few cups of sand that signify the smallest rocks. Here's the question: How do we put all the rocks in the jar? If we put the sand in first and then try to put the bigger rocks in after the sand has filled the jar, we won't have room for the big rocks. But if we put the big rocks in the jar first, we can easily add the smaller rocks and even the sand.

Think of Quadrant 2 activities like the big rocks. If we don't plan Quadrant 2 things first (putting first things first), they won't make it into our daily activities because we get so busy doing the less important, but often urgent items. When we plan the Quadrant 2 activities into our weeks and days, we find ourselves doing the most important things first. As a result, we enjoy inner peace, our self-esteem goes up, and we are more productive.

Quadrant Planning in Action

To put the principles of Quadrant Planning into a time management action plan, follow these steps:

Step 1: Quadrant 2 Questions In our planning time, rather than starting by listing all the "things to do," Covey suggests that we should *first* ask ourselves these essential questions.

- What do I want to be, do, and contribute to my life?
- What three or four things are most important to me?
- What are my long-range goals?
- Which relationships are most important to me?
- What are my primary responsibilities?
- What contributions would I like to make?
- What principles do I value?
- What feelings do I want to experience in life?
- How would I spend the coming week if I were to have only 6 months to live?

When we think about the days and weeks ahead, and what we will spend our time doing, we should first answer these questions. Our answers will guide our choices.

Step 2: Identify Roles To increase our feelings of order and balance and to help answer Quadrant 2 questions, we should focus on our roles in life. Much pain can come when we realize that we are succeeding in one role at the expense of another. Too often we hear of people who are successful in their business life but have problems with their family life or their spiritual life. A holistic view of life involves a balance between the various dimensions of life, including the physical, social, mental, emotional, and spiritual. Our roles help us fulfill the needs of these dimensions and give us a sense of wholeness in quality of life. These roles may include family, personal, business, school, relationships, and community. List your roles, and then go back and ask the Quadrant 2 questions with each role in mind.

Select Quadrant 2 goals for each role by asking the question: What is the most important thing I can do in this role today or this week to have the most positive impact in my life? For example,

Alexander Raths/Shutterstock.com

When we consider our roles, we don't miss out on what's most important to us.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

a mom might decide that the most important thing she can do in her relationship with one of her kids is to spend half an hour each night reading to him before he goes to bed. Perhaps only one goal per week is all that is necessary.

Step 3: Sharpen the Saw Covey recommends that we include in our planning a focus on what he calls sharpening the saw: A man struggles as he tries to saw a large tree with his handsaw. It's obvious his saw has a dull blade. A friend walks by and asks the man why he doesn't stop and sharpen his saw so he can cut the tree more easily. The man cutting the tree replies that he can't stop to sharpen the saw because he is too busy sawing. Have you ever felt like you are continually busy, yet you aren't doing anything significant? Taking time to sharpen your saw can dramatically affect the level of accomplishment you feel in your life.

Instead of busily sawing with a dull saw, you are cutting down the trees.

There are things in life that we can do that, if we did them regularly, would help us to sharpen our saw and help us do all the other things that we do with greater ease and effectiveness. When we plan, we should include some of those saw-sharpening activities for each of our dimensions. For example, for the physical dimension, we might focus on activities such as getting regular exercise or eating a healthier diet. We also might go to bed earlier and awaken earlier. In the emotional dimension, we might decide to meditate regularly. In the social dimension, we could plan to spend quality time with family and friends. In the spiritual dimension, we might read inspiring literature, take part in service-oriented projects, or pray more often. These examples have value in themselves, and they also help us do all the other things we want or need to do more efficiently and effectively.

Step 4: Evaluate—How Did I Do? **Integrity** is the ability to carry out a worthy decision after the emotion of making the decision has passed. When we are alone in our planning session, we tend to design our days and weeks based on our principles and values—we focus on the most important things. The challenge arises when something disrupts our plan. As we move through our day, someone invites us to do something that is far less important, though it may be enticing. We have the opportunity to keep first things first in this moment of choice. Are we going to sacrifice the best for the good? Or will we remain true to our plan and continue focusing on the best? Goethe said, "Things that matter most must never be at the mercy of things that matter least."

Part of developing ourselves, reducing stress, and reaching our goals involves seeing if what we are doing is working. Evaluation is the art of looking back, noticing what we did, how we did it, and if it worked to produce the results we intended. If it did, great! We can add to our pat on the back the question of how we can use that success to continue learning and growing. If we did not see the results we intended, what adjustments can we make in the future?

Here are a few questions for self-evaluation as the days and weeks go by:

- What have I learned about myself?
- What goals have I achieved, and what helped me reach them?
- What goals did I not achieve, and what kept me from reaching them?
- What patterns of success or failure do I see in setting and achieving goals?
- Am I setting goals that are realistic but challenging?
- Am I dedicating enough time to the three or four things that matter most in my life?
- What challenges did I meet, and what were my responses?
- Did I take time to keep my saw sharp in the dimensions of my life?

In review, Quadrant Planning for time management includes:

1. Differentiating between what is urgent and what is important
2. Identifying roles in each dimension of life
3. Sharpening the saw
4. Evaluating our performance

Decide what your highest priorities are and then have the courage to say "No" to other things. You do this by having a bigger "Yes" burning inside. The result is not the feeling that

STRESS STORIES

I Do What I Want to Do

Early one Saturday morning, my older brother called and asked if I could come to his home to help him clean his garage later that day. He lived about 60 miles away from me. Thinking this would not be a fun activity, I told him that I couldn't come, that I was too busy. I had too many other things to do.

A couple of weeks later he called again and asked if I wanted to spend that afternoon riding bikes in the mountains near a local ski resort. I had no fewer things to do on that day than I did 2 weeks earlier, but I told him that I would really like to go—and I did. Thinking about this while driving to his home that Saturday, I realized that I never *have to* do anything. I just as easily could have gone to his house two weeks earlier to help him clean the garage.

—MO

you have deprived yourself but, instead, a sense of satisfaction and accomplishment that you have concentrated on what you value.

11.7 Lifebalance

The third method of time management is called **Lifebalance.** Although this approach is significantly different from the earlier two approaches, it can be equally as effective in helping you organize your time and relieve stress.

Critics of traditional time management approaches contend that planning is too rigid and tends to dwell too much on doing and having, and not enough on being. These time management methods do not take into consideration our natural rhythms of life. It is as if we can stop to smell the roses only as we run by them quickly to do something seemingly more urgent. In the meantime, we miss life's critical unplanned moments. If we have planned every minute of our day and if we do not cross off every planned action from our list, we feel like we have failed. These approaches, critics say, do not seem to allow for spontaneity, freedom, and going with the flow. To some, traditional methods have an emptiness.

The Lifebalance approach to time and life management promotes a balance of purposeful planning and a healthy mix of going with the flow. In their book, *Lifebalance,*[7] authors Richard and Linda Eyre contend that we live too much of our lives out of balance. Unbalance results from bad habits—habits that emphasize work at the expense of family and personal growth, structure at the expense of spontaneity, or accomplishments at the expense of relationships (or vice versa on any of these). The result of this imbalance is what Thoreau called "lives of quiet desperation."

The search for a simpler, slower, more flexible, and more meaningful life has vanished in our culture with the constant search for *more, better,* and *different.* Competition has replaced contentment. Speed has replaced serenity. By contrast, balance implies a healthy combination of all that is important to us and letting our inner nature, rather than our environment and culture, dictate our speed and direction.

Some people are more comfortable with a lifestyle that takes things as they come, and they simply "show up" with whatever seems to unfold in their daily experience. To those who are vigorous planners, this approach seems frivolous and unproductive. How could people achieve anything if they didn't know where they are going? This follows the adage, "If you fail to plan, then you plan to fail." Again, we are reminded that time management is personal.

The frustration many people feel with time management planners includes the following:[7]

- Ninety-five percent of what is written in planners has to do with work, career, or finance, which creates an imbalance between work and family and personal needs.
- Planners cause us to live by lists, to act rather than respond. If we're not careful, our lists will control us rather than the other way around. We begin to view things that are not on our lists as irritations or distractions rather than opportunities, and we begin to lose the critical balance between structure and spontaneity.

FYI

Time Matters

From polling people around the country, the Eyres found that people list their priorities in this order:

1. Family
2. Personal character, including beliefs, education, inner growth
3. Work or career
4. Other interests, including recreation and TV

Compare this list with how people actually spend their time:

1. Other interests, including recreation and TV
2. Work or career
3. Personal character, including beliefs, education, inner growth
4. Family

While most of us need to work to support ourselves and our families, the amount of time we spend on work, recreation, TV, and other interests is considerably higher than the amount of time we spend with family or on personal character building. An imbalance exists between what people value the most and how they spend their time. A healthy lifestyle reflects a balance between work, play/leisure, relationships, self-care, and rest activities.

- Because they are problem–and accomplishment-oriented, most planners direct their attention to things, on getting, and on doing, sometimes at the expense of people, giving, and thinking, which results in an imbalance between achievements and relationships.

Here is an example from *Lifebalance*. Consider a typical businessman who uses a schedule book or a time organizer. If we analyze the contents, we find three things: First, we find that more than 95% percent of his entries (lists, plans, appointments, reminders) have to do with work. It is hard to find anything relating to his family or to his own personal growth. Second, his planning leaves no time for spontaneity or flexibility. He prides himself on using every hour of the day, and he "gets his kicks" from checking off everything on his list. His motto is "Act, don't react." He likes to say that people who are excellent planners don't like surprises, and he avoids them by allowing only the things on the list. Third, just as he makes no room on his schedule for spontaneity and surprises, he leaves precious little space for relationships. Planning and lists seem to deal much more with things than with people.[7]

11.8 Keys to Creating Balance

Keys to creating balance include simplifying, doing what really matters, sitting and thinking, and balancing structure with spontaneity.

Simplifying

In theory, knowing what we value most and acting on the things we value is an obvious way to live. In practice, it is something entirely different. We always wish we had more time for the important things in life. When we sit down to plan using this type of balancing, rather than asking, "What do I have to do?" we ask questions such as, "What do I *choose* to do?" or "What do I *want* to do?"

Unfortunately, day-to-day concerns occupy so much of our time that they tend to keep us from being available for these more important things. The essence of balancing the things we value is to simplify. We can develop the ability to simplify our days, and our lives, by asking these 4 questions:

1. Will it matter in 10 years?
2. What do I need more of in my life?
3. What do I need less of?
4. How can I make this simpler?

When we begin to ask these questions, we learn to say "No" more often to those things that aren't worth doing. Continually adding more items to our life has the effect of complicating and speeding up the pace of our life. Removing items from our life brings simplicity and freedom. The first step to balance our priorities is to simplify.

Doing What Really Matters

The second aspect of balance, related to simplification, is to direct our priorities to three specific areas, then work to balance these areas. The 3 priorities common to everyone are as follows:

1. *Family:* our relationships with family and friends
2. *Work/career/school:* all areas of our professional development
3. *Self:* development of our physical, mental, emotional, and spiritual self and the way we serve others, including activities with religious and community groups

To create more balance in your life, spend 5 minutes each day, before writing down any other plans or thinking about your schedule, deciding on the single most important thing you can do that day for your family, your professional development, and yourself. Imagine how many of your important goals you would accomplish if you were to focus on things that really matter.

Don't Just Do Something—Sit There!

Planning our days involves a commitment to stop everything and spend at least 5 minutes doing nothing other than thinking. Before planning your schedule, give yourself some sit-down time each day to ask yourself the critical questions mentioned previously.

In our solitude time, rather than asking, "What do I really want?" ask challenging but perhaps more useful questions such as "What do I need?" "What do I need in my physical life?" "What do I need in my social life . . . my spiritual life . . . my intellectual and emotional life?" Get in the habit of asking yourself these questions daily—then choose the thing you most need to do, and do it that day.

When do our best ideas come to us? Running around working frantically to get through the daily to-do list usually leaves no room for insights or ideas to pop into our awareness. Our best ideas come during times when our thinking has slowed, and we aren't concentrating on anything in particular. Examples include when we are in the shower, daydreaming, sleeping in, taking a leisurely solo stroll, driving, or just sitting. Often these insights can completely change an entire day in the direction of a more fulfilling and joyful experience. If we don't let the ideas through because of the busyness of our mind, we miss out on these best things.

Balancing Attitude—Balancing Structure and Spontaneity

Balancing our attitude involves considering both the destination and the journey. Our culture thrives on our reaching goals and enjoying the good feeling that comes with accomplishment. In doing this, we often tend to forget about the joy of the journey and the footsteps we take on the way to the goal, which are just as important as the goal itself.

The Eyres offer the comparison of the jets and the hot air balloons. The jets are the people who strive to arrive. People ride in jets to get where they are going as quickly as possible. People who dislike formal planning because of its rigid structure say the jets lack spontaneity. People ride in hot air balloons for the sheer pleasure of riding in them. The hot air balloons are those who stop to smell the roses, who go with the flow of the wind wherever it might take them.

On our way to living our days in more fulfilling ways, we can have both—the balloon and the jet. The yin and the yang of the Taoist symbol, shown in the photo, imply that we are made up of both the jet and the hot air balloon. We feel drawn to both ways of being.

Antiplanning describes the attitude of setting goals and being firm about where we want to go but at the same time being flexible on how we are to get there. With our limited wisdom, we don't always know the best way to do something. If we are open to opportunities rather than staying attached rigidly to what we have planned, we may find new directions, new opportunities, and sometimes even better goals. Antiplanning shifts our focus to a simpler attitude of enjoying each step of the journey as much as the goal we will reach.

The Fisherman

As the story goes, a lone fisherman sat on the beach, his fishing pole planted in the sand. Along came a corporate executive on vacation. "Why don't you have two poles so you can catch more fish?" the executive asked. "Then what would I do?" asked the fisherman. "Then you could take the extra money, buy a boat, get nets and a crew, and catch even more fish." "Then what would I do?" asked the fisherman. "Then," said the executive, "you could move up to a fleet of large ships, go wholesale, and become very rich." "Then what would I do?" asked the fisherman. "Then you could do whatever you want!" shouted the executive. The fisherman replied, "But that's exactly what I'm doing right now!"

We can use this story to guide us in making decisions about what really matters in life. We work longer hours to pay for an expensive vacation so we can collapse. What if we just work less, so we don't so desperately need to escape? We frantically work to increase our income so we can buy that big, expensive house only to find that we must work even harder to support it. Thoreau agreed when he said, "Our life is frittered away by detail… simplify, simplify."

George Shelley/Corbis/Getty Images

Simplify!

vladmark/Shutterstock.com

The Taoist yin-yang symbolizes balance.

11.9 Serendipity

Closely related to the Lifebalance approach to time management is the idea of serendipity. The English writer Hugh Walpole first coined the term **serendipity** to describe the quality that, through good fortune and sagacity, allows a person to discover something good while seeking something else. He came up with this word and definition after reading a Persian fable about the three princes of Serendipity.

The Three Princes of Serendipity

The story tells of three princes who went into the world to seek their fortune. None of them achieved what they were looking for, but they each got something else, something better. One found love, one found beauty, and the third found peace.

> These three men, while traveling through the world, rarely found the treasures they were looking for but continually ran into other treasures equally great or even greater, which they were not seeking. In looking for one thing, they found something else, and it dawned on them that this was one of life's sly and wonderful tricks. When they realized this, they got an entirely new slant on life, and every day resulted in a new and thrilling experience.[8]

The essence of this principle is that the happenings you don't expect are actually the things that are supposed to happen. Other definitions for serendipity are as follows:

- The capacity for making happy and unexpected discoveries by accident.
- The gift of finding valuable or agreeable things not sought after.[9]
- An unexpected discovery of something worthwhile during a search for an expected something worthwhile.[8]

The Keys to Serendipity

Serendipity emphasizes the following:

1. We need to be working toward something. We need to set goals for ourselves and move in the direction of those goals.
2. We need to be aware, alert, and observing things to realize the so-called happy accidents that occur as we are on the way to our original goal. If we don't tune in to what is happening, we miss things such as beauty, spontaneous moments, new and even better goals and directions, opportunities, and needs of others as they arise.

With serendipity, we can have both worlds—the jet and the hot air balloon. We can set goals and work toward them, but the flexibility of serendipity allows us to be open to spontaneous events as they occur. We don't treat interruptions as annoyances but as opportunities to discover something useful that might add to our joy and fulfillment. Richard Eyre sums up this idea:

> Too much planning can make the actual experience of living almost anticlimactic. Too much thinking about a thing removes us from it. We become observers, analysts, spectators, or critics rather than participants. If we can approach life more like an experience which holds vast variety and infinite potential for surprise, we will find ourselves dealing less with "success" and "failure" and more with progress and growth. If we must think about every detail of our lives, we ought to think about them after they have been lived (when we can learn from experience) not before and during (when the very thought may intercept or alter the experience).
>
> Approaching life as an experience makes us, moment-to-moment, more aware of what is happening and of what we are feeling—and less aware of what we plan to have happen or wish had happened. Thus, we see opportunities we could never have planned and realize far more serendipity than we otherwise could. Goals can co-exist with experience—they can shine like beacons and allow us to see our experiences more clearly in their order and light.[10]

Live your life each day as you would climb a mountain. An occasional glance toward the summit keeps the goal in mind, but many beautiful scenes are to be observed from each new vantage point. Climb slowly, steadily, enjoying each passing moment; and the view from the summit will serve as a fitting climax for the journey.

—*Harold B. Melchart*

Applying Serendipity

To know about serendipity and to use the principle in daily life are two vastly different things. Serendipity is not a common way of being for most people in our culture. We tend

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

not to think and act this way. But we can learn to move in this more balanced direction. This activity can help get you started.

Split-Page Scheduling

Start your planning time by drawing a line down the middle of your daily planning page. The left side of this page is for your traditional scheduling of activities and planning items to do that day. The right side of the page remains blank. We will fill this side, during the day or at the end of the day, with those unanticipated needs, unforeseen opportunities, and unexpected moments that come up during the day. These are items we could not have planned for but turn out to be as valuable as, or more valuable than, the things we had planned. The left side gets the list, and the right side gets the day's serendipitous after-it-happens notes, such as a new acquaintance, a fresh idea, a child's question, an unexpected opportunity, a friend's need, a chance meeting, or a beautiful sunset.

We must be in pursuit of something (left side of the page), and we must be aware, sensitive, and observant of other things that we didn't plan for (right side of the page). The right side of the page reminds us to be playful, be spontaneous, take risks, and be serendipitous.

With this type of flexibility automatically worked into our days, we create a new definition of a perfect day. A perfect day used to be one in which our high priorities, our *A* items, were checked off the list. Now an ideal day will still include that, but also, we jump the line to do the serendipitous things as well. Living in this more flowing, balanced way involves intentionally changing how we function throughout the day. From the outside, we may not appear to be doing anything differently; but inside we manage things in vastly different ways.

Lifebalance and awareness of serendipity do not mean we don't make plans and we don't set goals. The guiding principle is to *be strong and fixed on the destination but be creative and flexible on the route.*[10]

The Lifebalance approach to time management differs significantly from the ABC123 and Quadrant Planning methods, yet all 3 ways can be useful in helping individuals accomplish their goals, manage their time, feel fulfilled, and relieve stress. Next, let's look at procrastination and explore a variety of tips on how to overcome it and eliminate time wasters.

FYI

Gaining the Quality of Serendipity

- *Slow down.* Hurry tramples watchfulness and thoughtfulness. Smell the flowers, feel the sun, pause to breathe. Notice the needs of others and try to feel empathy. Sometimes, relaxing your pace can lengthen your stride.
- *Welcome surprises.* Anticipate them, look for them, expect them, and relish them. Surprises don't knock you off course; they reveal new destinations and new directions.
- *Enjoy the journey.* Look for and find joy today. Life is not a dress rehearsal.
- *Hold "Sunday Sessions."* On Sunday, look ahead to the next six days, thinking about what matters, about priorities and opportunities. These sessions adjust and refine goals as new options appear and new capacities grow.
- *Simplify and set your own standards.* Trading time for things is usually a bad deal. Trying to impress others with the newest and costliest car, fashion, brand name, address, toy, or trend is often a losing proposition.
- *Make goals without plans.* Although goals are an indispensable part of serendipity, tight, detailed plans are not. Spend your Sunday Session and other "thought time" conceptualizing your goals and laying out a general road map toward them but acknowledge that your exact route will be some combination of the schedule and the surprise.
- *Add playfulness and humor to each day.* Lighten up and allow yourself to make mistakes, to enjoy the more humorous parts of life, to laugh like a child.
- *Take risks and follow your feelings.* The dullness of our comfort zones lulls us into a false sense of security. Living fully involves taking risks and enjoying the surprises of what might come with the risks.

Source: Spiritual Serendipity, *by R. Eyre (New York: Fireside, 1999).*

11.10 Procrastination

Procrastination is the avoidance of doing a necessary task. It can lead to feelings of guilt, inadequacy, depression, and self-doubt. Procrastination has a high potential for stressful consequences. It interferes with our academic, professional, and personal success.

Styles of Procrastination

Psychologist Linda Sapadin identified 6 styles of procrastinators.[11] Do any of these sound like you?

1. *Perfectionists* fear that they can't complete tasks up to their expectations. They focus on details rather than overall objectives, and they fear they will make mistakes.
2. *Dreamers* have big goals but do not translate their ideas into a plan for action. They contrast with perfectionists, because dreamers don't get to the details.
3. *Worriers* focus on the worst-case scenario and see problems rather than solutions. They tend to avoid change and risk-taking.

> Nothing is so fatiguing as the eternal hanging on of an uncompleted task.
>
> —William James

4. *Crisis makers* wait until the pressure mounts to take action. By waiting until the last minute to complete a task, they create excitement from a temporary rush of adrenalin—and put their projects at risk.
5. *Defiers* resist new tasks and often don't follow through on what they promise to do. They avoid teamwork and are reluctant to make agreements.
6. *Overdoers* make the job harder than it needs to be and create extra work. They do not set priorities and refuse to delegate.

Note that the styles of procrastination are just a collection of habits. Habits are learned, and they can be unlearned.

Tips for Overcoming the Procrastination Habit

Here are some tips for overcoming the procrastination habit:

Turn elephants into hors d'oeuvres. Cut a massive task into smaller chunks so it seems less enormous.[12] When you can't seem to get started on a project, break it down into smaller tasks and do just 1 of the smaller tasks, or set a timer and work on the big task for only 15 minutes. If you know that your 30-page term paper is due in 1 month, start today by picking your topic or writing a rough outline. By doing a little at a time, you won't feel so overwhelmed, and eventually you'll reach a point where you will want to finish.

Avoid cramming. Despite their best intentions, students often study in ways that encourage forgetting. In addition to studying in noisy places, where attention is easily diverted and interference is maximized, they usually try to memorize too much at once by cramming the night before an exam.[13] The single most important key to improving grades may be through **distributed study** time, which refers to spacing your learning periods with rest periods between sessions. Cramming is called **massed study** because the time spent learning is massed into long, unbroken intervals. A comparison of 63 separate studies found that distributed study produced superior memory and learning compared to massed study.[14]

Manage your time zappers. A significant deterrent to successful time management is the **time zapper,** something that takes time away from what is more important. In Chapter 14, you will learn more about how technology can affect stress, but consider how Facebook or texting may be wasting your time. Probably the most significant time zappers are television viewing, gaming, and social media. Check out the FYI that reveals the amount of time Americans spend each day on various types of media.

Other time zappers include driving from place to place, unnecessary meetings, excess socializing, oversleeping, talking on the phone, social media, and worrying. You can think of many other things that would fall into the category of time zappers. Imagine what you could do if you were to spend those hours each day working on more productive things, such as learning a foreign language, playing a new instrument, or even doing homework.

The best way to manage time zappers is by planning. This chapter has suggested several excellent ways to plan your days and weeks. When you order your activities for the day and you follow through with discipline while maintaining appropriate flexibility, you will have an easier time saying "No" to the things that waste so much of your time.

TIME TIP

"I have found that taking study breaks is one of the most efficient ways I can spend my time. By taking a stretch or walk-around-the-block break and doing some deep-breathing exercises, I get so much more done when I return to my studying. I set the length of the break, usually 10 to 15 minutes, so I am not tempted to procrastinate. Sometimes I even set the alarm on my watch as a reminder to get back to work."

—Troy H.

STRESS STUDIES

Procrastinators Don't Sleep So Well

It has long been known that people who procrastinate have higher stress levels than those who don't, but how does procrastination affect sleep? In a study designed to answer this question, 8,742 students from 11 universities provided self-reports of procrastination and sleep behaviors including social jetlag (the absolute difference between mid-sleep times on weeknights and weekend nights), sleep duration, insomnia symptoms, daytime sleepiness, and sleep medication use. The results showed that procrastination is associated with greater social jetlag, shorter sleep duration, and worse sleep quality.

Source: *"Do Procrastinators Get Worse Sleep? Cross-sectional Study of U.S. Adolescents and Young Adults," by X. Li, O. M. Buxton, Y. Kim, S. Haneuse, & I. Kawachi,* SSM – Population Health, 10 *(2020).*

FYI

Cramming

Research shows that the majority of students do most of their studying right before the test. Although an intensive review before a quiz or exam does help, you are not likely to do well in college courses if this is your primary method of studying. One of the clearest findings in psychology is that spaced practice is a more efficient way than massed practice to study and learn. Just as you wouldn't wait until the night before a big basketball game to begin practicing your free throws, you shouldn't wait until the night before an exam to start studying.

Source: *"Measuring Study Time Distributions: Implications for Designing Computer-based Courses," by R. Taraban & W. S. Maki,* Behavior Research Methods, Instruments, & Computers, *31.2 (1999): 263–269.*

Yulia Grigoryeva/Shutterstock.com

Do you frequently spend time with media to avoid more important things?

Work hardest during your "best times" of the day. Most of us can find two or three hours during the day when we are most productive. Are you a "morning person," a "night owl," or do you do your most excellent work in the late afternoon? During our own best times, we usually have the most energy and are the most creative. Try to schedule your time so your most important activities can be done during these best times of the day.

Keep a time log. Just as a nutrition log is a record of everything you eat over a period, a time log allows you to see what you do with your time. Without changing your behavior, record everything you do, as you do it, from the moment you awaken until you go to bed. Every time you move from one activity, say eating breakfast, to watching the morning news, to the time you spend getting dressed, make a note of the time. After you do this for a few days, look carefully at what your log tells you about how you spend your time. You may be surprised at how much time you spend doing things that might be considered a waste of time or that have little value for you or anyone else.

Choose to refuse. Learn to say "No" to the unimportant or less important things. Most of us have difficulty saying "No," but this gets easier when we focus on our goals. You need to be convinced that you and your priorities are important. Before you agree to undertake any other tasks, ask yourself if those tasks or activities will lead you in the direction of your goals and priorities. Saying "No" to extra projects, social events, and invitations you know you don't have the time or energy for can prevent much unnecessary worry, guilt, and wasted emotional energy.

Delegate. Rethink the old saying, "If you want something done right, do it yourself." If some things don't require your attention, delegate them to someone else.

Establish levels of acceptable perfection. It is human nature to want to do our best on every task. Sometimes, we have difficulty

FYI

A Time Zapper

According to *The Nielsen Total Audience Report,* American adults spend over 11 hours per day listening to, watching, reacting to, or generally interacting with media. On average, American adults view live and time-shifted television for 4 hours and 46 minutes each day. Americans spend 3 hours and 48 minutes a day on digital mediums. Overall video use—time spent with a TV set, computer video, and using video-focused app/web on smartphones and tablets—adds up to nearly 6 hours per day for U.S. adults.

Source: *"The Nielsen Total Audience Report" by Peter Katsingris, retrieved June 10, 2019, from https://www.nielsen.com/.*

STRESS BUSTING BEHAVIOR

Time Zappers

What are your most obvious time zappers? Which items in this list sometimes zap your time?

- ○ Social media
- ○ Reading/writing e-mail
- ○ Talking on the phone
- ○ Watching TV
- ○ Looking for something you misplaced
- ○ Playing video games
- ○ Texting

Having discovered your time zappers, make a personal commitment to spend your time more wisely. Eliminating things that waste your time can do a lot to relieve your stress.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

STRESS STORIES

A Waste of Time

We don't need to eliminate time wasters completely, but frequently they take up so much of our time that little is left for us to do the essential things that have higher value for us. One day while we were discussing this principle in class, a student in the back of the room raised his hand and proudly declared that he had played a videogame for 24 hours straight. He took only brief breaks as needed, and then quickly resumed his gaming marathon. When I asked him how he felt about that, he mentioned that the time went quickly, and it was an enjoyable experience. He did say that it was probably not time well spent, though. The rest of us in the class agreed.

—MO

submitting work that may not reflect our best performance. Frequently, though, things we do don't need to be perfect. When this is the case, complete the task at an appropriate level, depending upon the importance of the item. E-mails sent to a friend do not need perfect grammar and perfect spelling. Take a realistic look at similar tasks and decide which can be your "good" work and which should be your "best."

Do the most difficult or most unpleasant tasks first. Once you have the tough tasks out of the way, you are freer to enjoy other tasks that are more enjoyable and fun. The most unpleasant tasks often are those that rank high on our priorities list. When we do those first, we earn satisfaction and inner peace.

Use "wasted" time. The time we spend sitting in the doctor's office or waiting for an oil change can be useful downtime. Read a novel, take some deep breaths, or practice visualization. Or use such downtime for journaling.

Enjoy the process. Ask yourself how you can do the task *and* have fun in the process. Maybe you can do your homework with your best friend, or go to a place with a stunning view of nature and do your homework there. If you know that something must be done but is unpleasant to merely think about, ask yourself how you can add something enjoyable to the process. Maybe you can make it a game or competition with an acquaintance.

Reward yourself. Even for small accomplishments, celebrate the achievement of goals. Promise yourself a reward for completing each task, or for finishing the entire job. Then keep your promise to yourself and indulge in your reward. Doing so will help you keep the necessary balance between work and play. Balance excellence in work with excellence in fun, relaxation, and play. As you do, you'll notice your creative juices flow, you'll feel more relaxed, and you will be generally happier.

Let some things go undone. Follow the advice of Lin Yu Tang, 20th-century essayist and philosopher, who said, "Besides the noble art of getting things done, there is the more noble art of leaving things undone. The wisdom of life consists in the elimination of nonessentials." Let it be okay not to finish some things—and even not to do some things—that are on your list. An incomplete list has only the meaning you give to it. It doesn't mean you aren't productive, and it certainly doesn't mean you are a failure. You decide what can be left undone and allow yourself to be good with that.

11.11 Digital Time and Life Management

This chapter supplies a toolbox of ideas and strategies to help you manage your time. Additionally, with smartphones, tablets, web-based programs, and other developing technologies, many apps and programs can help you manage your time and your life. Some are designed to help you organize your time and the activities of your days. Others are better at organizing your stuff (your ideas, notes, and plans). Some apps and programs are free, while others charge for their use. Those that require a fee aren't necessarily better than the free apps.

There is a lengthy list of available time and life management apps. The ones included here are examples of some of the best, but the favorites are a matter of taste. With a little homework, you can find an app or program that works for you.

To Do – https://todo.microsoft.com/tasks/ Whether you want to increase your productivity, decrease your stress levels, or just free up some mental space, Microsoft To Do makes it easy to plan your day and manage your life. With it you can stay focused on your day, get your lists anywhere on any device, share lists and assign tasks set one-time or recurring due dates and reminders, break your tasks into manageable steps, and add notes to any task. This app is great if you want to gain control over your time.

Workflowy – https://workflowy.com/ Workflowy works as both a mind-map and a way to organize and outline anything you want in a very intuitive way. You can use it for note-taking, brainstorming, or organizing virtually anything. It is easy to use and very powerful.

Trello – https://trello.com/ The makers of Trello describe this app as, "a collaboration tool that organizes your projects into boards." In one glance, Trello tells you what's being worked on, who's working on what, and where something is in a process. It is easy to use, and it keeps track of everything, from the big picture to the minute details of any project.

Evernote – http://evernote.com/ This powerful app helps you remember everything you need to remember. It has been called the granddaddy of note-taking. With it, you can save your favorite webpages, make plans, jot ideas, and take notes for classes, create recipes, plan trips, and anything else that you might need for future reference. You can include such items as pictures, video, or webpages.

Evernote, like these other apps, syncs across all platforms, allowing you to access your information from any computer, smartphone, or tablet. Evernote is simple to use and a snap to set up.

Dropbox – https://www.dropbox.com/ In the not-too-distant past, if you wanted to work on a file at school, and then later at home, you had to either put it on a jump drive or e-mail the file to yourself. Dropbox is a free app that serves as a personal cloud storage service.

This means you can store your documents, photos, and videos with the app, and then access them from any computer or app-supporting device. Not only is it convenient, but this app also makes file sharing and collaborating with other students, or even your professors, a straightforward process.

Managing your time and your life can sometimes feel overwhelming or cumbersome. These apps and programs can help you improve this part of managing your stress.

11.12 Conclusion

How you spend your time and the activities in which you take part each day are your choice. You may think you *have to* be in a class at a specific time, or you *must* be at work for a particular number of hours. You don't. No life requirement says you *must* be there. Although not showing up to work has consequences, you still have a choice. We always decide what we do with the 24 hours of our day, or the 168 hours of our week.

As you make those choices, don't mistake activity for achievement. Take time to pause from time to time and remind yourself of where you are going and how you want to get there. Henry David Thoreau once said, "It is not enough to be busy; so are the ants. The question is, what are we busy about?"

In this chapter, you learned 3 time management systems. Each is designed to help you gain more control of your life, reduce your stress, and enhance your well-being. Experiment with these systems and figure out which most appeals to you in your current circumstances.

We introduced a new way of looking at time, serendipity, which blends the stability of working toward a destination with the freedom to enjoy the journey along the way. You also learned tips for overcoming procrastination and ending time zappers. In the end, time management is more about managing yourself and your life than it is about managing time. You replace "I don't have enough time" with "I have plenty of time for what matters to me." Planning sets you free.

ACTIVITY

11.1 Time Log

Purpose The purpose of this activity is first to determine precisely how you spend your time, and second to analyze how you can spend your time more effectively.

Directions

I. For 3 or 4 consecutive days, including at least 1 weekend day, keep track of how you spend your 24 hours. Write down each activity, and account for every minute of your day, including the time you spend sleeping. Keep a journal or notebook with you throughout the day so you can immediately write down the following information in your time log:

1. Date.
2. Time of day.
3. The time spent doing the activity.
4. What you did.

II. Once you have completed your time log for 3 or 4 days, analyze how you can use your time more effectively.

1. What is your most productive time of the day?
2. What are your biggest time zappers?
3. Review the styles of procrastination discussed in this chapter. Do you see evidence of any of them when you review your time log? If so, what style most clearly describes you?
4. What is one specific thing you can do to manage your time more effectively?
5. What is the most important new insight you gained from completing this activity?

Key Points

- Planning happens when you bring future events into the present and apply appropriate control.
- Pareto's law holds that 80% of the potential value can be achieved from 20% of the effort.
- ABC123 Prioritized Planning is a time management system that enables us to prioritize the most important activities in our day.
- Quadrant Planning starts with a long-term approach to time management by guiding us to put first things first, and to decide what is important versus what is urgent.
- Lifebalance is an approach to time and life management that blends planning and spontaneity.
- Serendipity is part of Lifebalance that allows a person to discover something good while seeking something else.
- Procrastination is a habit that interferes with effective time management.
- Activity should not be mistaken for achievement.
- Time management is more about self-management than about managing time.

Key Terms

time
management
time management
planning
Pareto's law
monochromic time
polychromic time
ABC123 Prioritized Planning
Quadrant Planning
urgent
important
integrity
Lifebalance
antiplanning
serendipity
procrastination
distributed study
massed study
time zapper

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

References

1. "Time and the Body: Re-embodying Time in Disability," by W. Seymour & W. Bunrayong, *Journal of Occupational Science, 9* (2002): 135–142.
2. "Impact of Time Management Behaviors on Undergraduate Engineering Students' Performance," by R. V. Adams & E. Blair, *SAGE Open,* (January 18, 2019): 1–11.
3. "The American Freshman: National Norms for Fall 2004" by L. Sax, S. Hurtado, J. Lindholm, A. Astin, W. Korn, & K. Mahoney, retrieved April 29, 2011, from http://www.gseis.ucla.edu.
4. *How to Get Control of Your Time and Your Life,* by A. Lakein (New York: Signet Book/New American Library, 1973).
5. *Time Management: An Introduction to the Franklin System*, by R. Winwood (Salt Lake City: Franklin International Institute, 1990).
6. *The 7 Habits of Highly Effective People*, by S. Covey (New York: Simon & Schuster, 1989).
7. *Lifebalance: Bringing Harmony to Your Everyday Life,* by R. Eyre & L. Eyre (New York: Ballantine Books, 1987).
8. *The World of Serendipity*, by M. Bach (Marina del Rey, CA: Devorss and Co., 1970).
9. *Webster's New Collegiate Dictionary* (Chicago: G & C Merriam Co., 1967); also at the Merriam–Webster Dictionary website: retrieved April 29, 2011.
10. *Serendipity of the Spirit*, by R. Eyre. (Salt Lake City: Homebase Publishers, 1988).
11. "Procrastination in a Digital Age," by A. Tala, retrieved November 30, 2019, from https://www.healthline.com/health-news/procrastination-digital-age.
12. *An Invitation to Health* (16th ed.), by Dianne Hales (Stamford, CT: Cengage Learning, 2015).
13. "Exam Cramming Doesn't Help Your Brain Retain Crucial Knowledge Long Term," by A. Reichelt, retrieved November 30, 2019, from https://www.abc.net.au/news/2016-10-29/why-cramming-for-exams-the-night-before-rarely-works/7974910.
14. "A Meta-Analytic Review of the Distribution of Practice Effect: Now You See It, Now You Don't," by J. Donovan & D. Radosevich, *Journal of Applied Psychology, 84* (1999): 795–805.

chapter
12

Money Matters

My money seems to disappear. I would like to know where my money goes, and even plan a budget, but I have no idea how to start. Is there a simple way to budget my money so I can get the things I really want and stop feeling so stressed about running out of money?

Everyone I know stresses about money. What can I do to deal with my growing credit card debt?

My dad tells me I should start saving while I'm young. Even if I could save a little, it doesn't seem like it would be enough to make a difference. If I could save $5 a day, how much would I have in 10 years?

In many places around the world, people are happy, even though a lot of them live in poor conditions. How does having money relate to being happy and feeling satisfied with life?

Photobank gallery/Shutterstock.com

I've got all the money I'll ever need, if I die by four o'clock.
—*Henny Youngman*

Learning Objectives

Study of this chapter will enable you to do the following:

12.1 Explain the ABCs of money management.

12.2 Create and implement a plan for financial fitness.

12.3 Set financial goals to reduce money-related stress.

12.4 Discuss how doodads and credit cards contribute to financial stress.

12.5 Investigate the relationship between money and satisfaction in life.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

Real People, Real Stories

Sami's story One day when I was a freshman, my friends and I decided to take off for the mall. It had been a tough week at school, and I needed something to make me feel better. I had plans to buy a new CD, but when I got ready to pay, my credit card was declined. I could have died from embarrassment! That had never happened to me before. I had gotten three credit cards since I started college, and it suddenly hit me that I was in way over my head.

The first time I applied for a credit card was on my first day on campus. Guys with clipboards were signing people up and giving away t-shirts. I liked the idea of being old enough to have my own credit card and promised myself that I would use it only for emergencies. It didn't take long for the first "emergency" to come along. My car clunked out, and it cost me $200 to get a hose replaced. Before I knew it, I had maxed out the $1,000 credit card limit. When I couldn't make even the minimum payments, I used another credit card to get cash to make the payments.

I honestly don't know where the money went, but I knew I needed help. I went to the counseling center on campus, and the counselor helped me set up a budget, but even now, 3 years later, I still have a poor credit history.

12.1 Money Matters

Concert tickets, a new car, a gym membership, new clothes, fancy kitchen items, the latest phone—we face temptations to spend money every day. These are the things we *want*, but what about the things we *need* to survive in college? Tuition, books, a good computer, food, a safe place to live, and adequate transportation—these are just a few of the many expenses one must juggle to be a successful student.

Money is a leading source of stress for college students. According to the National Student Financial Wellness Study, 72% of students said they feel stress regarding their personal finances.[1] More than 3 out of every 4 American families are in debt, according to the Federal Reserve's Survey of Consumer Finances. Not surprisingly, over three-quarters of Americans (76%) cite money as a significant cause of stress.[2]

Living above your means is a tremendous burden. The actual cost of debt and financial problems isn't just the interest rate you pay to Visa or MasterCard. The actual cost is the toll that it's taking on your life and your relationships.

This chapter relates to one of the most common stressors around the world—not enough money. And though money truly won't make you happy, lack of money is a significant stressor. The bottom line is that money matters! In this chapter, you will complete a series of exercises to start you on the road to financial fitness. You will learn how to manage your money so you can reduce your stress now and for years to come. We will also investigate the relationship between money and satisfaction in life. You might be surprised at what the research shows.

What is required to get your finances in shape? Just as we would like to have a strong, fit body without having to exercise regularly, we would prefer healthy finances without having to spend any effort. In the real world of college students, though, the chances are slim that you will gain financial fitness without exercising some healthy habits to get you there.

So, while the college years are often a time of getting out of shape financially, you will be relieved to know that you can undertake some specific financial exercises to help you develop financial fitness. The ABCs of money management can get you started.

FYI

There's a Reason *Loan* Sounds Like *Moan*

Seventy percent of college seniors who graduate have student loan debt, with an average debt of $37,172 per borrower.

Source: *"Here's How Much the Average Student Loan Borrower Owes When They Graduate," retrieved June 13, 2019, from https://www.cnbc.com/2018/02/15/heres-how-much-the-average-student-loan-borrower-owes-when-they-graduate.html.*

Rolf Bruderer/Flame/Corbis

Financial pressure ranks high on the list of stressors facing college students.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

STRESS STUDIES

Financial Worries Top Stressor List; Young Adults Most Stressed

Americans feel stressed, according to a national stress study that focused primarily on Americans' self-reported sources of stress and methods for coping with it. A survey of 1,000 men and women, ages 18 and older, revealed that 47% of respondents currently feel more stress than they did 6 months ago. And—no surprise—the number 1 source of stress for half (49%) of those surveyed is personal finance.

Young and Stressed, Older and Mellower

Young people report higher levels of stress than their older counterparts. Nearly 6 in 10 respondents in the 35 to 44 years of age category reported high or very high levels of stress (58%), while less than one-quarter (23%) of respondents in the 55-plus age group reported experiencing the same upper levels of stress. The youngest age group surveyed, those 18 to 24 years of age, registered the highest response (64%), showing they are more stressed now than 6 months ago.

Americans Adapt New Age Approaches for Handling Stress

When asked about stress coping strategies, more respondents cited "meditation and breathing techniques" (28%) than the more traditional approach of "taking a vacation" (25%), which may also point to economic factors—which can turn vacations into as much a source of stress as a stress reliever. On a healthy note, exercise tops the list of reported methods for tackling stress.

Source: *"New Poll Shows American's Stress Levels Rising," by M. Moyad, retrieved June 14, 2019, from http://multivu.prnewswire.com/mnr/boothresearch/35279/.*

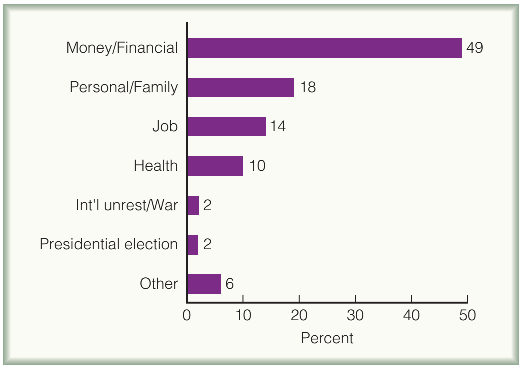


FIGURE 12.1
Sources of Stress
Of the following, which would you say is the most stressful for you?

Source: *http://multivu.prnewswire.com/mnr/boothresearch/35279/, October 2, 2008, PRNewswire.*

> We are obsessed with money. Yet we don't take money seriously enough.
>
> —*Jacob Needleman*

12.2 The ABCs of Money Management

Management is necessary when there are many demands upon your finite amount of money, as is the case for most college students. Practicing the ABCs of money management can put you in control of your money instead of putting your money in control of you. ABC refers to assessment, budget, and control.

Assessment

Assessment means looking at where you are right now and evaluating how you got there. Assessment includes both awareness and analysis. All change starts with knowledge of what needs to change. So, you should begin by becoming aware of your current spending habits and your thoughts and emotions linked to spending. Activity 12.1 at the end of the chapter can guide you through this assessment.

EXERCISE 1 Current Spending Habits

To get started, keep track of what you spend for 1 week. Write down every penny you spend, and what you spend it on, each day. This will give you a clear picture of where your money goes. For now, don't worry about your monthly expenses. Simply record your daily spending for a full week, including the weekend. Write down each item immediately so you don't forget.

Don't forget to keep track of how much you spend on pleasure and enjoyment. You might be amazed to find out how much you spend on movies, alcohol, coffee, music downloads, or cigarettes.

Thoughts and Feelings Linked to Money In addition to helping us pay for the things we need, we sometimes use money to address our emotional needs. Assessment involves more than merely tracking where our money goes; we also do it to figure out *why* we spend money.

We may believe that money can buy us pleasure, friendship, power, and happiness. We must be careful not to let money become a substitute for emotional needs that we would be better off addressing in other ways.

Think about how this money–emotion connection relates to you. Have you ever gone out and bought something expensive when you were sad or lonely to try to feel better? Or maybe you felt a real sense of power and importance when you picked up the dinner tab for 4 of your friends. Although we may get temporary pleasure from impulse buying and spending, those pleasurable feelings quickly turn into feelings of stress. If we don't feel regret the next day, we probably will when the credit card bill arrives!

Tip: To deal with stress, people sometimes use shopping much like eating—they spend money to feel better. Shopping is not inherently problematic, but when it is used as a quick and temporary emotional fix, it may lead to higher stress levels from overspending and incurring debt. Take time to make a list of what you need before you go shopping, and stick to the list to avoid emotional shopping.

EXERCISE 2 Money and Emotions

As you track your spending for Exercise 1, analyze your thoughts and feelings attached to your spending. Notice how often issues of stress and money are related. Did you head to the mall when you were bored? Was going to the movies a way to escape from studying? These things are not necessarily good or bad. The point of this exercise is to help you get in touch with your thoughts and feelings linked to spending so you can make conscious decisions about what is most important to you in relieving stress over both the short term and the long term.

Budget

Once the assessment is complete, you can move to the *B* of money management—budgeting. *Budget* is not a dirty word, even though it has negative connotations for many. It is like the word *diet* in that both create a sense of deprivation. A **budget** is just a plan you develop to manage your money so you can have what is most important to you and realize your financial goals. It is a road map to get you where you want to go. If more money goes out than comes in, no matter how much money that is, you create a potential stressor. A budget can guide you to end that stressor.

Tip: If you don't like the word *budget*, call it a *cash-flow plan* or a *money tally*—whatever works for you. *Cash-flow plan* has a positive ring, reminding you that cash actually flows both in and out.

EXERCISE 3 Financial Goals

Many people go through life not really thinking much about their financial goals. The first step in creating a successful budget is to develop your financial goals and write them down, so you can determine what you want to do with your money. You then develop a plan to realize those goals. After graduation, you may want to re-evaluate and set goals for the future, but for now define your financial goals with an emphasis on your college years. Include both short-term and long-term goals for your student years.

Tip: As you do this, create SMART goals. **SMART goals** are **S**pecific, **M**easurable, **A**ction-oriented, **R**ealistic, and **T**ime-based. For example, you might set as a goal: "I will work 20 hours per week as a work-study student to pay for my room and board for the spring semester." To say, "I want more money by the end of the semester" is meaningless. This is no time to be wishy-washy. The more specific you are in your goals, the more likely you are to succeed.

Here are some examples of short–and long-term financial goals to get you thinking:

- I will pay myself first by using direct deposit to put 5% of my paycheck immediately into a savings account.

(*Continued*)

EXERCISE 3 *(Continued)*

- I will spend a maximum of 10% of my paycheck on entertainment.
- I will graduate from college with no debt.

Once you have written your financial goals, look back to Exercise 1, where you recorded everything you spent for a week. Take a red pen and cross out all the expenditures that were unnecessary and did not contribute to your recently written financial goals.

EXERCISE 4 Income and Expenditures

To evaluate your income and expenditures, begin by calculating what you expect your income to be over the academic year. Add up all sources of money, including from work, financial aid, and family. Next, determine your expenses for the year. Think about tuition, room and board, books, car, and any miscellaneous expenses. Take a comprehensive look at what comes in and what goes out. What does this tell you about your balance of income and expenditures?

Now you are ready to develop a budget. The key is to make this as easy as possible, because if you make it too complicated you won't do it. All you need are a legal pad and a pencil. If you'd rather work on the computer, financial software such as Quicken or Microsoft Money can be an excellent way to view your financial picture. Remember, this is *your* plan.

EXERCISE 5 Develop Your Budget

You can develop your own budget in many ways. One simple yet effective method follows these steps:

1. Get your checkbook, credit card statements, or other records of expenditures. (See Exercise 4.)
2. Make a column for each category of spending—for example, tuition, food, rent, entertainment, and car expenses.
3. List each purchase under the proper column. Round to the nearest dollar.
4. Total each column.
5. Add all the column totals together.
6. Compare this amount with your income.
7. Adjust where necessary.

Step 7 is where we often need help. How do we adjust where necessary? And what is necessary? This is where we start to take control of our income and expenditures. You can do this in many ways, as you will learn in the *C* step, control, of the ABCs of money management.

TIME TIP

"Even though I try to stick to using 1 credit card, I tried an experiment to help save some time in determining how I was spending money. I used 2 credit cards, 1 for all my needs and 1 for my wants. Each month, I could review my statements to help me see how much I was spending on things I wanted but didn't really need. Doing this saved me money, as I began to think more deliberately about my want purchases. I also saved time by having an easy record of my spending."

—Jim H.

Control

Now that you clearly see the money coming in and the money going out, you can make informed choices on how to balance your financial picture to accomplish your financial goals.

One thing you will notice from your budget is that you have fixed expenses such as tuition and car payments, and you have flexible expenses such as going out to eat or buying a new shirt. Many people find that a budget helps them with these flexible expenses that require frequent decision making.

This is an excellent time to differentiate between what you want and what you truly need, as the two are easily confused. How

STRESS BUSTING BEHAVIOR

Money Management Checklist

The ABCs of money management require action. On your own, do the following (if you haven't already).

○ Record your current spending habits
○ Assess the thoughts and emotions attached to your spending
○ Develop your personal financial goals
○ Calculate your expected income and expenditures for the year
○ Develop your budget

Completing each step moves you one step closer to financial freedom.

many pairs of jeans do you need? How many concerts do you need to attend? Do you really need a smartphone? Even though you don't always see it this way, you do have choices in both income and expenditures. The key to financial success is to understand that your budget does not mean merely recording your income and expenses but also consciously deciding how you will manage your money.

In the rest of this chapter, you will gain information and receive practical tips to guide you in adjusting so you can take control of your money. By decreasing your expenditures and increasing your income, you can take control in many ways. Although everyone's situation is different, some common factors can leave us feeling out of control in managing our money.

12.3 Doodads and Credit Cards

Two areas of financial management that deserve extra attention because they so often leave us feeling out of control and contribute to financial stress are doodads and credit cards.

Doodads

Author Robert Kiyosaki[3] defines **doodads** as expenses, often unnecessary or unexpected, that take money out of your pocket. Doodads are small but steady expenses that can drain away our cash. Author David Bach[4] calls this the **latte factor.** The latte factor is a metaphor for where you spend money on trivial things that you could cut back on without changing your lifestyle. He explains what happens when we pay $3.50 a day to buy a latte (or any other small, non-essential purchase).

Beware of the Latte Factor

A latte a day = $3.50
A latte a day for a week = $24.50
A latte a day for a month = $105
A latte a day for a year = $1,277.50
A latte a day for a decade = $12,775
A latte a day for 30 years = $38,325

The latte factor illustrates how we spend money without realizing how it adds up. Just think! The money you spend in one year on a daily $3.50 latte, or similar item, could buy a new computer; the money you spend in 10 years could buy a new car or a trip around the world. So, whether it is beer, bottled water, magazines you never read, or a soda and candy bar during breaks, think carefully about whether the purchase is worth it to you. We waste a lot of money by not thinking carefully about the purchases we make.

EXERCISE 6 Doodads Do Add Up

Take a few minutes to think of 1 doodad—a small but steady expense draining your cash—that is part of your routine. Maybe you can't walk by the bookstore without going in and buying a paperback or 2, or maybe you eat lunch at the student union every day when you could pack a lunch instead. Maybe you buy a latte every morning. Maybe you pay for many more minutes on your cell phone than you really need. Once you have found your doodad, determine its cost. Calculate what you would save in a month if you were to drop the doodad. Then calculate the total savings for a year, 5 years, and 10 years. What could you do with that money in 10 years?

To carry the latte factor a step further, Bach illustrates the power of saving by explaining what would happen if you were to put the money you would have spent on a latte to work for you by investing the money.[4]

The Strength of Saving

$3.50 per latte × 7 days a week = $24.50

If you were to invest $24.50 a week and earn a 10% annual rate of return, you would wind up with:

1 year	$ 1,339
2 years	$ 2,818
5 years	$ 8,257
10 years	$ 21,870
15 years	$ 44,314
30 years	$ 242,916

In these days of lower interest rates, 10% may be a little high, but you get the point. Saving money may be the last thing on your mind when you're in college, but you can readily see how saving even a small amount regularly can help tremendously in achieving your financial goals and, as a result, bring you financial peace of mind.

science photo/Shutterstock.com

24/7 easy access to money can contribute to impulse buying and overspending.

Strategies for Saving Some strategies for saving include:

- Drop a doodad and deposit the money into savings instead.
- Pay yourself first. Put a part of every check into your savings account before you pay your other bills. Make this automatic so the amount you set is automatically moved from checking into savings.
- Empty all your loose change into a big can and deposit it into savings when the can is full.
- Put your tax refund into your savings account.
- Save 1 hour a day of your income. For instance, if you make $10 an hour and work for 8 hours a day, have $10 automatically moved from your checking account to your savings account for every day you work.
- Use the online budgeting app, Mint. Mint automatically updates your spending and savings transactions and keeps you up-to-date on your financial picture—savings, spending, and investing. You can set budgets that notify you when you spend too much in a specific category.
- Use the online savings app, Acorn. Acorn automatically rounds up purchases to the nearest dollar and invests that spare change into an investment account. For instance, if a purchase adds up to $1.50, Acorns rounds it up to $2 and sends 50 cents into an investment.

Dropping doodads can go a long way toward improving your peace of mind. The intent is not to remove the special things that bring pleasure to life but, instead, to thoughtfully analyze where you spend your money to determine if the costs are worth the benefits. If going out with the guys every Wednesday for a soda and burger is something you look forward to all week, you will want to find a way to work that into your budget. But if you find that you put 3 bucks into the vending machines every night for a soda and a snack, mostly because you need a break from studying, you might want to explore other options.

Credit Cards

Doodads are not the only money-drainers. Credit cards can be a subtle way to accumulate debt.

Once upon a time, a frog jumped into a pot of hot water. Feeling the intense heat, it immediately jumped out and saved its life. But another frog jumped into a pot of cool water sitting on a burner over low heat. One degree at a time, the temperature increased, but the frog became accustomed to it, stayed in the pot, and eventually was boiled.

The moral of this story is that gradual, hardly perceptible changes can do us in—like our slow but steadily increasing credit card debt. We become accustomed to the gradually growing credit card debt until one day we open our credit card bill and wake up to the realization that we are in way over our head and see no way out. As Sami testified in the opening vignette, credit card debt can haunt a person for years.

Somehow, when you charge your purchases to a credit card, it doesn't seem like you spend real money. Financial advisors estimate that we would spend about 20% less by switching to cash-only payments. Unbelievably, people used to get along fine without credit cards!

CandyBox Images/Shutterstock.com

Credit cards make it easy to buy lots of stuff, but stuff doesn't equal happiness.

FYI

Signs You Have Too Much Credit Card Debt

Credit cards make it extremely easy to spend, but with that ease comes a cost. Sallie Mae says that 33% of college students graduate with more than $10,000 in credit card debt. Sixty percent of first-year students max out their credit card within the first year. How can you tell if your credit card balance is too high? Here are some sure-fire signs that you're carrying too much credit card debt:

- You're constantly stressed.

If you think about your credit card debt every day and feel panicked, that is a sign it's negatively affecting your quality of life.

- Your debt isn't going down.

If you're making payments toward your credit card debt every month, but the balance isn't decreasing (or it's decreasing very slowly), you likely need to create a more strategic plan for paying down that debt. This can occur when you're only making minimum payments.

- You've reached the limit on one or more cards.

Carrying a balance on a credit card isn't always a bad thing if you know the financial impact it will have and balance that against the benefits. However, reaching the limit on your credit card rarely provides any benefit, either to your wallet or to your credit score.

- Your total debt-to-income ratio isn't good.

Generally speaking, a total debt-to-income ratio of 15% or less is ideal. If yours is above 50%, your debt is considered high-risk. This includes all sources of debt (mortgages, credit cards, auto loans, student loans, etc.). If you think your credit card debt is too large, it might be time to create a budget to help get your finances under control.

Source: *"Average Credit Card Debt 2018," by S. Kessler, retrieved June 14, 2019, from https://www.studentdebtrelief.us/debt-credit/average-credit-card-debt-2018/.*

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

STRESS STORIES

Interest Rates on a Home Mortgage

The power of searching for a better interest rate became painfully obvious when we became home buyers. This principle holds, though on a much smaller scale, with credit cards. When we moved into our home, we had a mortgage interest rate of 8.64%. If we had paid off the house in 30 years, we would have paid $370,302 in interest alone.

Three years later, we refinanced the home. The balance had not decreased much, but this time we got an interest rate of 4.875%. If we pay the loan off in 15 years (rather than 30), we will pay only $71,024 in interest. By paying a little more principle each month and dropping the interest rate by slightly more than 4%, we end up saving just under $300,000 on our home! That's stress relief!

—MO

Tips for Managing Credit What can you do to avoid becoming buried under credit card debt? Here are some suggestions that might work for you:

- Use credit cards only for emergencies or carefully planned-in-advance purchases.
- If you must use a credit card, pay off the full balance each month.
- Don't pay just the minimum payment each month. Spending even $20 or $25 more than the minimum can save you thousands of dollars over time.
- Limit the amount you allow yourself to put on your card every month.
- Limit yourself to one credit card—close cards you don't use.
- Remember that credit is *debt*, not more income.
- If you use a credit card for most of your purchases, use a rewards card.
- Use a credit card with a low interest rate.
- Learn to defer gratification. Avoid impulse buying by making your money or credit card hard to access. Leave your credit card home, or take only a prearranged amount of money with you when you go out.
- Wrap your credit card and secure it with tape when you carry it with you. The mere act of unwrapping it might allow you time to reconsider if you really need to make this purchase.
- Be aware that student credit card deals aren't always your best bet. Students with a limited credit history are considered credit risks, so although you may get the card, you'll have a high interest rate.
- Rather than a credit card, use a debit card so the money will come out of your checking account immediately. That way, you can't spend more than you have.

Our friend Anne shares this added tip:

> When my husband started his first job after college, he wisely realized that he could go wild with his credit card if he didn't put up some kind of roadblock to using it easily. So, he hid it in a book at home. The title of the book? *Irrational Man.*

EXERCISE 7 Pros and Cons of Credit Cards

Although credit cards have the potential for creating financial chaos, they also can serve a valuable function if you use them carefully. Make a list of the pros and cons of having a credit card. Then reflect on whether the pros outweigh the cons.

Your list might look something like this:

Pros:

- Establish a good credit rating, so if I want to buy something big in the future, like a house or a car, I will be able to secure a loan.

(*Continued*)

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

EXERCISE 7 *(Continued)*

- A credit card could save the day if a real emergency arises and I need money fast.
- Some credit cards include insurance for the items I buy.
- A credit card might come in handy, so I don't always have to carry cash.
- For some purchases—such as airline tickets—it is more convenient to pay with a credit card.

Cons:

- I might spend more money with a credit card because it doesn't seem like real money.
- Interest rates can be high, so if I can't pay off the balance, I might end up throwing away my money on interest.
- The fine print on the credit card agreement can be impossible to understand. I may not know what I am getting into.
- If I can't keep up on my payments, I can mess up my credit rating for 7 years (or more).

Being smart about credit cards helps reduce financial stress. Conversely, getting and using credit without a plan is like riding a bike without brakes full-speed ahead down a steep slope. The rush of the wind on your face may feel great, but you'd better brace yourself for the crash when you reach the bottom.

12.4 Stress on the Job

Many students must work to pay the cost of attending college. Research shows that students are working more and juggling many roles, which creates anxiety and lowers graduation rates.[5] For many, this is just the start of many years of employment. Understanding job-related stress and gaining skills to help prevent unnecessary stress at work will help improve your work experience, both now and in the future.

Job stress is estimated to cost American companies more than $300 billion a year in health costs, absenteeism, and inferior performance. Also, consider these statistics:

- Forty percent of job turnover is due to stress.
- Healthcare expenditures are 50% greater for workers who report elevated levels of stress.
- Job stress is the source of more health complaints than financial or family problems.
- The average cost of absenteeism in a large company is more than $3.6 million per year.
- Depression is the most significant single predictor of absenteeism and work-related performance.
- Depressive illness, a common side effect of job stress, in employees is associated with 10 annual sick days.
- Insurance data shows insurance claims for stress-related industrial accidents cost twice as much as non-stress-related industrial accidents.[6]

Preventing Job Stress

You can reduce some job stress by learning how to manage your time and your job duties. Think about what triggers stress for you at work. Focus on one or two things you can do that will help reduce stress. Here are some ideas:[7]

- **Meet with your manager** at least once a year (every 3 or 6 months is even better) to talk about your job and your performance. If a performance review is already part of your job, treat it as a chance to clear up issues that may be causing stress for you. Here are some questions to ask:
    - What is expected of me in this job?
    - Where is this company going? How do I fit in that plan?

  - How am I doing? What are my strengths? How can I improve?
  - What can I expect if there's a problem with my work or my job?
  - If I continue to do well, how might my efforts be recognized?
- **Get organized.** Keep track of your projects and deadlines by making a list of what is urgent. Decide what matters most and what can wait.
- **Don't put things off.** Plan your day or week. Just seeing on paper that you have time to get each task done can help you get to work. Break large projects into small steps, and set a deadline for each one.
- **Learn to say "No."** Don't overcommit yourself. If you take on too much, you spend more time focused on checking things off your list than on creating value.
- **Focus.** Do one thing at a time.
- **Limit distractions and interruptions.** Give yourself blocks of time when you won't be disturbed.
- **Delegate.** Ask others to take on tasks. It's not always essential to have all the control.
- **Unplug.** Don't let the technologies that help you do your work get in the way of your leisure time. Consider turning off smartphones when you are with family or friends. Avoid checking work e-mail when you're not at work.
- **Be realistic.** Remember that everyone has good days and bad days at work.
- **Reward yourself.** When you finish a challenging task, celebrate. Enjoy a snack at your desk, or—if your job allows—take a short walk or visit with a coworker.
- **Schedule time for fun.** If you spend every second of your day getting things done, you may resent never doing what you enjoy. If your employer offers a flexible work schedule, use it in a way that fits your work style. Go to work earlier and take a more extended break at lunch to attend a yoga class or go for a walk.
- **Practice breathing and relaxation techniques.** You can do this at home or in a quiet place at work.
- **Set a goal to reduce job stress.** First, find what creates stress at work. Maybe it's lack of control over your job. Or perhaps you are worried about losing your job or how you are doing at work. You might feel stress because you're unable to express your thoughts and ideas to your boss and coworkers.

Think about why you want to reduce stress at work. You might want to protect your heart and your health, or simply enjoy your life more and not let work stress control how you feel. Your reason for wanting to change is essential. If your motivation comes from you—and not someone else—it will be easier for you to make healthy changes.

Next, set a goal to reduce your stress. Think about a long-term and a short-term goal. Here are a few examples:

- Shelly's long-term goal is to reduce stress when things happen that she can't control by remembering she can't control a lot of things, and to just go with the flow. Her short-term goal is to do deep breathing and relaxation exercises when she feels frustrated. She'll try it the next time her boss hands her a last-minute project.
- Jill's long-term goal is to reduce stress by speaking up at work and expressing her interests and ideas more effectively. Her short-term goal is to practice being more assertive. When she's ready, she'll contribute an idea at a department meeting.
- Tom's long-term goal is to reduce stress by having a good understanding of what's expected of him at work. His short-term goal is to find out how he is doing now. He plans to schedule a meeting with his boss to talk about his performance and how he can improve.
- John's long-term goal is to reduce stress by saying "No" to projects he doesn't have time to manage. His short-term goal is to get organized and prioritize his current projects. He will make a list of all his work, then prioritize the most important tasks.

After setting your goals, **think about what might get in your way.** Use a personal action plan to write down your goals, the possible barriers, and your ideas for getting past them. By thinking about these barriers now, you can plan for how to deal with them if they happen.

Most importantly, make sure you **get support** from friends and family to reduce job stress. If your company has an employee assistance program, use it to talk with a counselor who can help you set goals and provide support in dealing with setbacks.

12.5 Additional Tips for Managing Your Money

What else can you do to manage your money wisely? Students in several classes were asked to list strategies they found useful to prevent or reduce financial stress. Here is their advice:

- Look for activities that don't involve money, such as working out or playing intramural sports.
- Make a budget!
- Put away 3% of every paycheck for emergencies, no matter how big or small the amount.
- Carpool to save money—or better yet, walk or ride your bike.
- Take advantage of free or low-cost activities on campus such as discount movies, sports events, and activities associated with free food.
- Eat in the cafeteria or cook at home. Eating out is expensive.
- Have your paycheck automatically deposited in your bank.
- Talk to the counselors and find out about scholarships. Many scholarships don't get used because students don't apply.
- Buy a used car, not a new one.
- Have only 1 credit card and use it only for emergencies and gas.
- Save on groceries by shopping with a list of items you need, and never shop when you're hungry.
- Avoid buying on impulse, and never spend more than $75 on anything without taking 24 hours to think about it. This gives you time to decide if the purchase is essential.
- Do laundry at your parents' house.

FYI

Consequences of Credit

A typical minimum monthly credit card payment is broken down into 90% interest and 10% principal. By paying the minimum (2%) each month on a card with an 18% annual percentage rate (APR), paying off a $2,000 purchase will take more than 19 years. You will pay more than $3,800 in interest, so a $2,000 purchase will end up costing you more than $5,800!

Source: Climbing the Steps to Financial Success, *by F. Williams (Lafayette, IN: Arolf Publishers, 2004).*

Learning to control spending is not easy in this time of instant gratification, but the payoff in financial management and reduced stress is worth the control. Applying the ABCs of money management can give you control over your spending habits and reduce your financial distress, but, as you will learn in the next section, there is more to the topic of money and stress than just learning how to budget.

> Better is bread with a happy heart than wealth with vexation.
>
> *—Amenemope (11th century)*

12.6 Can Money Make You Happy?

We all have heard warnings such as "There's more to life than money" and "Money can't buy you love." The famous Bible verse "The love of money is the root of all evil" prompts us to explore the issue of how money affects our life—and our stress. Money is a good thing, and a necessity to get what we need, but it also can contribute to stress, put a strain on relationships, and have other negative consequences.

What are the relationships between money, satisfaction in life, and stress? Now that we have examined the practicalities of money management, we can benefit from exploring some philosophical issues. The source of much money-related stress is not just money itself but, rather, the value we give to money. Stress-relieving money management may be just as much about managing our mind as about managing our money.

If we track American life since the end of World War II, we find that inflation-adjusted income per American has almost tripled. New homes have doubled in size. We have more clothes, requiring closets the size of our grandparents' bedrooms, and so many vehicles and toys that a two-car garage will no longer suffice. Surely, in this society of abundance, we must be happier than our ancestors were half a century ago. Not so, according to polls taken periodically since the 1950s by the National Opinion Research Center. In the 1950s, about

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

one-third of Americans described themselves as "very happy," and the percentage is almost the same today (31%).[8]

Many people mistakenly believe that having more money results in having more happiness. The poll found that happiness tended to increase as income rose to $50,000 a year. After that, more income did not have a dramatic effect.

A growing body of social science and psychological research has shown little meaningful relationship between how much money a person earns and whether that person feels good about life. Dr. Ed Diener, one of the nation's preeminent researchers on happiness said, "…over the past 50 years, income has climbed steadily in the United States, with the gross domestic product (GDP) per capita tripling, and yet life satisfaction has been virtually flat. Since World War II there has been a dramatic divergence between real income (after taxes and inflation) and life satisfaction in the United States." While Diener finds that people he describes as "well-off" are generally happier than poor people, he postulates that may be because "cheerful people are likely to make more money than unhappy people." Diener further points to cheerful people having a stronger social network of friends and family that has a far higher correlation to happiness than income and wealth. [9]

FYI

Who Wants to Be a Millionaire?

Have you always dreamed of winning the lottery? Surely then all your troubles would be over. A study of lottery winners found that they did not wind up significantly happier than a control group.

Source: *"How Winning the Lottery Affects Happiness, According to Psychology Research," by K. Loria, retrieved June 16, 2019, from https://www.businessinsider.com/winning-powerball-lottery-happiness-2017-8.*

Affluenza

A millionaire was asked, "How much money would it take to make you feel content?" He replied, "Just a little bit more." No matter how much money we make, we always want just a little more.

We live in an environment that encourages commercialism and overspending, which can lead to a dangerous trap—living beyond our means. The more we make, the more we spend. This never-ending desire to "get more stuff" has a name: **affluenza.** Affluenza describes the disease-like epidemic that entices people to have more material possessions and spend money they don't have, resulting in more debt. We confuse the "have-to-haves" with the "want-to-haves."

Like the millionaire, we always want just a little bit more. The more we have, the more we have to protect and maintain. It's like being on a treadmill; you run faster and faster just to stay in the same place. As Leo Buscaglia pertinently said, "The more you have, the more you have to worry about."

Reference Anxiety—Keeping Up with the Joneses

The phenomenon in play here seems to be what sociologists call **reference anxiety,** in which people judge their possessions in comparison with others, not based on what they need. If your friend has a newer, more expensive car than yours, even though your car works just fine and gets you where you need to go, you may experience reference anxiety from comparing what you have with what others have.[9]

When we look around and see someone else who seems to have more—and we gauge our happiness on that comparison—we end up chasing money rather than meaning. The outcome is frustration and dissatisfaction with what we have. Money no longer supplies a sense of well-being, even when we have more than an adequate amount to meet our needs.

In nations with high levels of income equality, such as the Scandinavian countries, well-being is reported to be higher than in nations with unequal wealth distribution such as the United States,

STRESS STUDIES

Can Money Make Us Happy?

What has the science of positive psychology discovered about what makes us happy? More than you might imagine—including what *does not* increase our level of happiness. Research has shown that once your basic needs are met, more income does little to raise your sense of happiness.

Researchers at Princeton University analyzed data from a sample of over 450,000 adults in the United States. These respondents reported their annual income and rated how much they experienced positive emotions on the previous day. Emotional quality was assessed by questions asking people to think about the previous day and to rate how much happiness and enjoyment they experienced, and how much they smiled and laughed.

The results showed that up to an income of somewhere between $60,000 and $75,000, more money was associated with feeling a little bit happier. So, a higher proportion of people who make, say, $70,000 tend to be happier than people who make, say, $40,000. The difference isn't large, but it is statistically significant.

But once a person has about $75,000 a year, having more money is not associated with greater happiness. The average millionaire is no happier than the average person who makes $75,000 a year.

Source: *"The Psychology of Happiness—Does Money Make People Happy?" by M. Leary, retrieved June 16, 2019, from https://www.thegreatcoursesdaily.com/does-money-make-people-happy/.*

where the gap is widening between the wealthy, the middle class, and the poor.[9] Because wealth is so visible in today's society, it triggers envy and dissatisfaction. We feel like we always need to have more because the people around us appear to have more. Benjamin Franklin said, "Who is rich? He that is content. Who is that? Nobody."

It is sad to think that we can be financially wealthy and yet emotionally broke. Too often, we spend most of our waking hours away from the people we love, working in jobs that we find boring and unfulfilling. Why not do everything in our power to find jobs and careers that nourish our mind and soul as well as our bank account? Increasingly, people express their desire to find meaningful life work. Many want to contribute rather than merely work for a living.

The point is that money can't make us happy. If we believe this is true, we don't act like it. We spend most of our time and energy pursuing money and the things that money can buy at the expense of activities that create real-life fulfillment, such as nurturing relationships with friends and family and helping others. Some people even lose their health in the quest for money and, ironically, once they have lost their health, most would pay anything to have it back. An American Association of Retired Persons (AARP) survey showed that 20% of Americans over the age of 45 say financial stress caused their health problems.[10]

NISSAN
DAIMLERCHRYSLER
Chrysler
Dodge

AP Images/Duane Burleson

Affluenza, the never-ending desire to acquire, is a source of high stress. Happiness and peace are not dependent on possessions. More stuff does not make us happier.

Money and Relationships

Money is a source of stress in many relationships. It is not just the perceived shortage of money that causes stress in relationships, but also the time we spend making money rather than being with family and friends, as well as disagreements on how money should be used. Respondents in 1 survey said that managing their finances is the most significant strain on their relationships. Figure 12.2 depicts complaints of respondents with financial issues.

What we find is that money management is really mind management. Once our basic needs are met, the money, or lack of it, doesn't cause our stress. How we think about money determines the role it plays in our well-being. We decide the value we give to money and, as a result, either the satisfaction or agony it produces.

> It is the preoccupation with possession, more than anything else, that prevents men from living freely and nobly.
>
> *—Bertrand Russell*

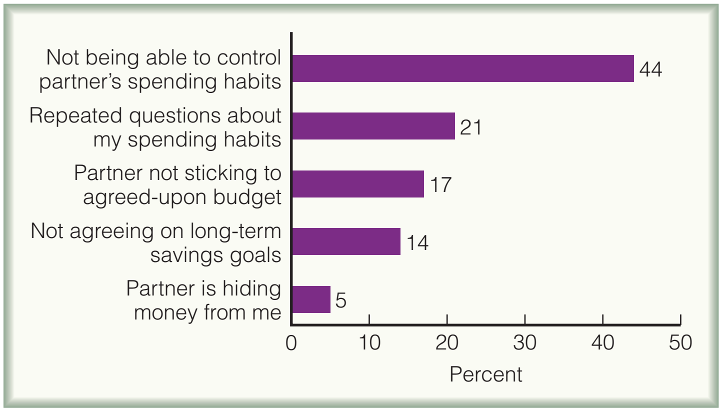


FIGURE 12.2
Complaints Between Partners with Financial Issues

Source: *"Money and Relationships," by D. Haralson & S. Parker,* USA Today, *March 15, 2005.*

Con Tanasiuk/Design Pics/Corbis

Managing finances can be stressful for relationships.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

Being poor can certainly contribute to stress and unhappiness. Sociologists in Europe and the United States have found that the poor are more often unhappy in part because of the never-ending frustration and stress of poverty. But worth considering is the repeated finding that, after people reach a certain level of income, happiness and money don't seem to have much of a relationship with each other.

12.7 Putting It All Together—What the Experts Say

Dave Ramsey, the well-known financial guru, was asked this fundamental question: "What is the most important financial principle?" This was his reply:

> The Dave Ramsey Show, and my company, the Lampo Group, have become very well known for teaching people how to get out of debt, save money, and get on a budget. All of us on staff here are very thankful for the response we've had to these concepts, but another financial concept is the hinge on which the door of successful personal finance swings. I have only begun to realize the full significance of this concept during the last year or so. When you understand this concept, all the other concepts work, and until you implement it, none of them will work. When you stick this concept deep in your soul, it becomes easy to save money and even have money to invest. Getting out of debt can quickly happen once you learn how to apply this concept in your life. Budgeting is made easier, and your marriage or relationships about money are freed up and made smooth. This is the most important financial concept.
>
> Contentment. That's right, contentment. Contentment brings peace. Not apathy. Not the deadhead fog of Prozac or Valium. Only contentment brings peace. We live in the most marketing-focused society in the history of the world. The very essence of marketing is to disturb your peace. We say things to ourselves like, "I'll be happy when I get that boat," or "I'll be happy when I get that china cabinet," or "I'll be happy when I get that house." Or, or, or, or!!!
>
> NOT TRUE. Happiness is sold to us as an event or a thing, and consequently, our finances have suffered. *Fun* can be bought with money; happiness cannot.
>
> We live among a bunch of people who are deeply in debt and have no money saved because their emotions were tricked. Just like drug addicts, people have been conned into believing that happiness will come with the next purchase. So, Daddy works hundreds of overtime hours and Mommy works 40-plus hours a week . . . all in the name of STUFF. You probably think I am writing about someone else, but I'm not. I am writing about you. I know because I suffer from the same disease, but I am recovering, and so are many of you. The human spirit was not created to attain peace, contentment, or fulfillment by gathering more stuff.
>
> You *can* get out of debt, save money, and get on a budget, but until your intellect forces your emotions and your spirit to accept that STUFF does not equal CONTENTMENT, your finances will always feel stressed. At our office, we counsel every week with folks who are making $25,000 per year as well as folks making $250,000 per year. These people share a common problem: they all suffer from some level of "stuffitis," the worship of stuff. Change your focus and change your life for the better.[11]

12.8 Conclusion

Even though changing how you spend and save money can be challenging, it can bring a lifetime of financial freedom. You must be flexible, however, and give yourself some time to get it right. In any case, you deserve the financial peace of mind that comes with managing your money so you can have the things that are most important to you. The ABCs of money management can guide you in developing a plan that will help relieve financial stress. Think of a budget not as giving up what you want but, instead, getting what is most important to you. Evaluating how issues including doodads, the use of credit, and savings affect your financial status will give you the information you need to make informed decisions about your money.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

Using money involves more than just earning and spending it. Wealth is mistakenly believed to represent the road to happiness. Having insufficient funds can and does contribute to stress, but money in and of itself does not ensure happiness. Happiness and satisfaction with life are more about good health, supportive relationships, and finding meaning in life than about accumulating money. The key to reducing financial stress and finding contentment is to assess what is most important to you, and then implement a plan to achieve it.

Money is neither good nor bad. It is merely a tool, just as a pencil is a tool. Robert Kiyosaki writes:

> A pencil can be used to write a beautiful letter or a memo firing someone from a job. While a pencil is designed to write with, it can also be used as a lethal weapon to stab a person in the eye. The thing that makes the difference isn't the object, but the motives of the person holding the pencil—or managing the money.[12]

ACTIVITY

12.1 Spending Habits and Emotions

Purpose The purpose of this activity is to provide you with an opportunity to track your spending habits, increase awareness of emotions that influence spending, and plan your financial goals.

Directions For 1 week, track your spending. At the end of the week, go back and review your log, answer the reflection questions, and use this learning to plan financial goals.

I. Track your spending

Include the following information in your spending log for each purchase you make:

1. Day, date, and time
2. Place
3. Amount spent
4. What you purchased
5. Whether your purchase was a "want" or a "need" (Ask yourself this question: "Is this purchase something I need or is it something I would just like to have?")
6. The emotions associated with the purchase (Were you happy, depressed, lonely, or bored?)

During the week when you complete the log, try not to change your spending habits. Let this serve as a record of your regular spending habits.

II. Analyze your spending

After you have completed your spending log for 1 week, review it and respond to these reflection questions:

1. Do you notice any patterns to your spending behaviors? For example, do you spend more money when you are with certain people or at certain times of the day?
2. What do you notice about your feelings related to spending behaviors?
3. Are there any purchases that you made this week that you now regret making?
4. Do your spending habits contribute to your stress? If so, how and what changes can you make to help you reduce financial stress?
5. What are 2 new insights you gained from completing this activity?

III. Plan for the future

Using the SMART format, write 2 personal financial goals.

Key Points

- Financial pressure ranks high on the list of stressors facing college students.
- Practicing the ABCs—assessment, budget, and control—of money management can put you in charge of your money.
- A budget is a plan to manage your money so you can have what is most important to you and realize your financial goals.
- Financial goals can guide you in getting what you want financially.
- Money allows us to pay for the things we need, and it also can be used to address emotional needs.
- The latte factor is a metaphor for spending money on trivial things that you could cut back on without changing your lifestyle.
- Two areas of financial management that deserve extra attention because they so often contribute to financial stress are doodads and credit cards.
- Regularly saving even a small amount of money can contribute to financial freedom.
- Applying strategies for reducing and preventing job stress can bring a lifetime of increased job satisfaction.
- The source of much stress is not just money itself but, rather, the value we give to money. It may be just as much about managing our mind as about managing our money.
- Money does not necessarily equate to happiness, but a lack of funds to meet basic needs can contribute to the stress of poverty.

Key Terms

budget
SMART goals
doodads
latte factor
affluenza
reference anxiety

References

1. "Survey Shows Most Students Carry Stress About Finance, Paying for College," by B. Hackettt, retrieved June 12, 2019, from https://www.nasfaa.org/news-item/4939/Survey_Shows_Most_Students_Carry_Stress_About_Finance_Paying_for_College.
2. "APA Offers Tips to Help Deal with Your Stress about Money and the Economy." Retrieved March 11, 2014, from http://www.apa.org/helpcenter/economic-stress.aspx.
3. *Rich Dad, Poor Dad*, by R. Kiyosaki (Paradise Valley, AZ: TechPress, 1998).
4. *The Finish Rich Workbook: Creating a Personalized Plan for a Richer Future*, by D. Bach (New York: Broadway Books, 2003).
5. "Stress Among Working College Students Case Study: Faculty of Engineering Sibiu, Romania" by R. Savescu, A. M. Stoe, & M. Rotaru, *De Gruyter Open 10,* (2017).
6. "The Financial Burden of Job Stress." Retrieved March 10, 2014, from http://www.uml.edu/Research/Centers/CPH-NEW/stress-at-work/financial-costs.aspx.
7. "Managing Job Stress." Retrieved December 1, 2019, from https://m.kp.org/health-wellness/health-encyclopedia/he.managing-job-stress.ta5662spec?kpSearch=job%20stress.
8. "GSS Data Explorer: Trends." Retrieved June 13, 2019, from https://gssdataexplorer.norc.org/trends/Gender%20&%20Marriage?measure=happy.
9. "How to Be as Happy as a Billionaire: Hint: Be Happy before Becoming One," by P. N. Danziger, *Forbes,* (October 25, 2018), retrieved from https://www.forbes.com/.
10. "Financial Stress Can Make You Sick," *AARP Bulletin*, *50*(2) (2009): 9.
11. *The Money Answer Book*, by D. Ramsey (Nashville, TN: Thomas Nelson, Inc., 2004).
12. *If You Want to be Rich and Happy Don't Go to School*, by R. Kiyosaki (Fairfield, CT: Aslan Publishing, 1993).

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

chapter

13

Social Support, Relationships, and Communication

Yuri Arcurs/Shutterstock.com

> Our need for each other is not an obstacle to overcome, but a virtue to be celebrated.
>
> —*Robert F. Allen*

Do men and women communicate differently?

My boyfriend just doesn't understand me. What can I do to get him to really listen to what I am saying?

When I ask my girlfriend what's wrong, and she says "Nothing," I believe her. Why is it that she means something else, and what can we do to communicate better?

I just transferred to a new school, and I don't have any friends here. Everyone has their cliques, and I don't fit in. I'm stressed and lonely. What can I do?

Learning Objectives

Study of this chapter will enable you to do the following:

13.1 Describe the connection between social support and stress.

13.2 Describe the types of social support.

13.3 Explain how active listening is the key to better communication.

13.4 Explain the importance of touch as a form of nonverbal communication.

13.5 Discuss how men and women may manage stress differently.

13.6 Identify the styles of conflict management.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

Real People, Real Stories

Reza's Story Living an active lifestyle during my college years has placed me in many stressful situations. Whether it has been stress from time constraints, money, family, or school, stress has been a regular occurrence in my life. But I can quickly pinpoint the most stressful time in my life.

One year ago, I learned that my dad had a lump in his lung. Doctors told my dad, a 35-year smoker, that he probably had lung cancer. While we awaited the test results, I found it difficult to concentrate on school. Trying to come to terms with the likelihood that I would lose my dad influenced every moment of my life. In the end, after some serious surgeries, dad is recovering.

Looking back on this stressful time, I did several things to help me handle my anxiety. I began to pray more often. I spent more time in nature, hiking in solitude. I exercised more than usual, and I talked to my family and friends. These helped a lot.

Through it all, the most valuable thing I learned was to love and to spend as much time as possible with those who matter to me. If I could offer advice, I would tell people to be proactive rather than reactive in their relationships. Sitting next to my dad in the hospital, feeling the regret of not spending more time with him while he was healthy, was something I hope never to experience again. After having this near miss with him, I now spend more time with my family and the people I love. I was given a second chance with my dad, and I won't forget it.

13.1 Social Support, Relationships, and Communication

> No man is an island, entire of itself; every man is a piece of the continent, a part of the main.
>
> —*John Donne*

Friends are good medicine, especially when it comes to preventing stress. Social support and close relationships are known to go together with good health, and studies show that loneliness has the opposite effect. Supportive relationships can serve as a shield to protect us from potential distress and well may be one of the most important ways to prevent stress. Close, rewarding relationships can supply a tremendous emotional lift to boost your self-esteem and happiness and contribute to overall health and well-being.

In Chapter 1, you learned that social health is one of the dimensions of health. The focus of this chapter is to provide you with information and skills to grow in the social dimension. We will explore the ways a social support system and healthy relationships can provide a buffer for stress. Because communication is essential to healthy relationships, you will learn about communication skills, including empathic listening. Finally, you will learn how to manage conflict, which is a source of stress in many relationships. The outcome is healthier, less stressful relationships and improved quality of life.

Tim Pannell/Cardinal/Corbis

Healthy relationships play a role in helping to buffer the effects of stress.

13.2 Social Support

We are social creatures. We crave human connections. Even the most reclusive of us have relationships of one kind or another. In our time of widespread stratification and separation, we still continually communicate and develop support systems.

Social support is an individual's knowledge or belief that he or she is cared for and loved, belongs to a network of communication, and has a mutual obligation with others in the network.[1] It is the provision of psychological and material resources intended to benefit an individual's ability to cope with stress.[2] A social support system consists of all the people who help meet emotional, physical, personal, and financial needs. Social support is belonging, being accepted, and feeling loved and needed. Much like the penguins, the balance between our willingness to help others and our willingness to be supported is what results in healthy relationships.

Types of Social Support

Researchers[1,3,4] have distinguished between different kinds of social support:

1. **Instrumental** (or tangible) **support**, such as giving aid through money, use of a car, or a place to stay.
2. **Emotional support,** which includes building esteem, emotional comfort, love, trust, concern, and listening.
3. **Informational support,** which consists of giving advice, suggestions, directives, and other information.
4. **Appraisal support,** which provides affirmation, feedback, and information for self-evaluation.
5. **Perceived support,** which is the expectation that others will provide support if needed.
6. **Received support,** which is the actual provision of support by another.

Think about a time when you needed support from someone. What type of support did you need, and who offered it? What kind of support best helps you manage stress right now in your life? Social support can come from friends, family members, teachers, sports and athletic teams, members of your religious affiliation, members of clubs, school organizations, and elsewhere. The people who make up your social support system are the ones with whom you spend time and to whom you turn in times of need.

Social Support and Stress

It doesn't take a scientific study to prove that surrounding yourself with supportive family, friends, and coworkers positively affects your physical and emotional well-being, but there is

STRESS STUDIES

Don't Worry, Be Happy

University of Illinois researchers Ed Diener and Martin Seligman specifically looked at happiness in a study they conducted with 222 undergraduates. Diener and Seligman compared the upper 10% of students who consistently rated themselves as "very happy" people with those who rated themselves as "average" and "very unhappy" people. The incredibly happy people were highly social and had stronger romantic and other social relationships than less happy groups. The incredibly happy people were more extroverted, more agreeable, and less neurotic. The results showed that the most prominent characteristics shared by the 10% of students with the highest levels of happiness and the fewest signs of depression were their strong ties to friends and family, and commitment to spending time with them. One might infer that good social relationships are, like food and thermoregulation, universally important to human mood. "Word needs to spread," concludes researcher Ed Diener. "It is important to work on social skills, close interpersonal ties, and social support in order to be happy."

Source: *"Very Happy People," by E. Diener & M. Seligman,* Psychological Science, 13*(1) (2002): pp. 81–84, cited in "The New Science of Happiness," by C. Wallis,* Time, 165*(3), (2005): A2.*

FYI

You've Got a Friend

Humans need each other. We aren't the only creatures that need social support, as this story illustrates.

Penguins spend their lives battling some of the harshest weather on the planet—ice, snow, wind, and brutal cold. Left alone in these conditions, they surely would perish. Huddling in masses called scrums, the penguins take turns standing on the edge of the scrum, using their bodies to shelter the others. When an outside penguin begins to grow weary, it is folded gently into the inner warmth and comfort of the scrum and another penguin takes its place. It is both their strength as protectors and their willingness to be protected that allow them to survive.

Source: *"Penguins: The Math Behind the Huddle," by K. Gammon,* Inside Science: Reliable News for an Expanding Universe, *retrieved December 4, 2019, from https://www.insidescience.org/news/penguins-math-behind-huddle.*

blickwinkel/Alamy Stock Photo

Penguins spend much of their life battling harsh conditions. Their willingness to support and protect each other helps them survive.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

STRESS BUSTING BEHAVIOR

Social Support Network

Consider the names of the people you turn to for each type of social support. Think about what they do to support you and how this support helps reduce your stress. Recognizing and acknowledging the people who provide support is a crucial step toward experiencing their support.

○ Instrumental or tangible support
  People who support me:
  What they do:
○ Emotional support
  People who support me:
  What they do:
○ Informational support
  People who support me:
  What they do:
○ Appraisal support
  People who support me:
  What they do:
○ Perceived support
  People who support me:
  What they do:
○ Received support
  People who support me:
  What they do:

plenty of research to confirm it. Research suggests that social support provides a buffer for mental and physical problems in these ways:[5]

- Protects against the full impact of mental and physical illness.
- Decreases functional impairment in patients with depression and increases the likelihood of recovery.
- Decreases the risk of developing PTSD upon exposure to combat trauma.
- Confers resilience to stress.

Whether it is offered before, during, or after a stressful event, social support can have a positive effect. Indirectly, having a support system can contribute to an overall sense of happiness. A strong social support network can be critical to help you through the stress of tough times, whether you had a difficult day at school or a year filled with loss or chronic illness. It is never too soon to cultivate these healthy relationships.

Social Support and Health

A classic study looking at the influence of social support on health came from an epidemiologic study conducted on residents of Alameda County in California. Individuals 30 to 69 years of age were surveyed in 1965 on their physical, mental, and social well-being, as well as health-related habits such as exercising, using cigarettes, and consuming alcohol. They also were asked about their social networks, such as marital status, number of close friends and relatives, church membership, and affiliation with other organizations. Over the years, death certificates were checked to assess mortality rates, and follow-up surveys were conducted on survivors to determine their health status.[6]

TIME TIP

"Probably the best thing I've learned, the thing that has helped me manage my time as much as anything else, is the one magic word: 'No!' Once I learned how to say 'No' to the unimportant things, I seem to have more time and energy to say 'Yes' to the important things, like quality time with my family. If I don't say 'No,' the unimportant things lead to days that are spent trying to put out fires."

—Steve O.

As expected, the study found a strong association between certain unhealthy behaviors and higher mortality rates. More surprising, the study also found that individuals' health status and risk of dying were strongly associated with the extent and nature of their social network. This association remained true even after taking unhealthy behaviors into consideration. Throughout the socioeconomic spectrum, the mortality rates of men and women with few social contacts were 2 to 3 times higher than those with many social connections.

More recent studies have supported the conclusions of the Alameda County study. Absence of social support has been related to an increase in coronary heart disease, complications in pregnancy and birth, suicide, and other unhealthy outcomes. In a study of breast cancer survivors, women who joined a support group after surgery lived twice as long as those who didn't.[7] Married men live longer than single men. The positive effects of social support on the immune system provide more evidence that a support system can alleviate the significant stressor of poor health.

One of the best examples of the relationship between social support and health was Dr. Dean Ornish's work on reversing heart disease. He showed that improving one's lifestyle can cause blockages in the coronary arteries to regress. His program included a low-fat diet, exercise, yoga, and meditation components. But Ornish believed the essential part of his program involved "transcending that isolation that I think really is the root cause of so many of the self-destructive behaviors and emotional stress, which in turn are such major contributors to so many of the illnesses of which so many people suffer."[8] Regarding heart disease, Ornish viewed isolation as a risk factor as important as high cholesterol levels or obesity.

Tip: Think about the culture you grew up in and the extent to which it valued social support. Did your family have close, supportive friends as you grew up? Were relationships with extended family part of your childhood? Did family and friends take part in significant events in your life?

Social support means having the support of people you trust and can talk to, with whom you feel a close connection and with whom you share both good and bad times. Why social support has such a substantial and consistent effect on health is not fully understood. Researchers hypothesize that social support probably acts in part through its ability to buffer stress. The comfort and support provided by a friend or family member reduce the intensity of events that could seem threatening. As a result, a person is protected from the effects of stress.

STRESS STUDIES

Supportive Relationships: More Is Better

Thanks to a growing number of large-scale studies, evidence of a link between social support and physical and emotional well-being has been abundant. Sheldon Cohen, professor of psychology and researcher at Carnegie Mellon University, studied the effects of psychological stress and social support on immunity and susceptibility to infectious disease. His work shows that those having more types of social relationships, including family but also neighbors, friends, workmates, and members of religious and social groups, were less likely to develop a cold when exposed to a rhinovirus. Those who had 1 to 3 types of social relationships were more than 4 times as likely to develop a cold than those with 6 or more types of social relationships. Network diversity—receiving support from different networks of people (church, school organizations, and family)—was a more important determinant of susceptibility than the total number of people in one's social network.

Sources: Fundamentals of Complementary and Alternative Medicine *(4th ed.), by M. Micozzi (St. Louis: Saunders Elsevier, 2011); "Social Support, Stress, and the Common Cold," by S. Persons, summary of a presentation, Office of Behavioral and Social Sciences Research,* NIH Record *(National Institute of Health), Dec. 2, 1997.*

13.3 Relationships

Social support systems are composed of a web of relationships. During his lifetime, author and educator Leo Buscaglia, who wrote and lectured extensively about love and relationships, said this about relationships:

> There is no being or becoming without relationships. From the beginning, we grow to sense the need and importance of relatedness. We human beings have the longest period of dependency of any living creature. At birth, in total helplessness, we engage in our first coupling, mother-child, and from that time on, the more sophisticated our lives become, the more interrelated we become. In a sense, we spend our entire existence weaving one relationship into another until we've created, like the web of a spider, a complete pattern.[9]

Relationships play an essential role in determining whether young adult and college years, or one's adult years, are satisfying and positive or lonely and stressful. Going off to college is a time of developing new friendships, dating, forming intimate relationships, and often falling in love and choosing a life partner. With

Franco Vogt/Corbis/Getty Images

A strong and diverse social support system helps to offset the negative impact of stress.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

CULTURE CONNECTION The Roseto Effect

Over many years, a study was conducted in Roseto, Pennsylvania, a close-knit community of religious immigrants from southern Italy. Researchers interested in the lifestyle of the community residents followed their health status and death for years. They found that the residents of Roseto had average frequencies of exercise, cigarette smoking, obesity, high blood pressure, and stress. Their diets were higher than the average American diet in fat and cholesterol. The researchers were surprised to learn, however, that the men in Roseto had only about one-sixth the incidence of heart disease and death from heart disease compared to random population groups in the United States. Rates for the women of Roseto were even better.

The researchers discovered that the protective factors were a strong sense of community and strong social ties between the residents. One researcher, Stewart Wolf, said:

> More than any other town we studied, Roseto's social structure reflected old-world values and traditions. There was a remarkable cohesiveness and a sense of unconditional support within the community. Family ties were very strong. What impressed us most was the attitude toward the elderly. No one was ever abandoned.

Over the years, as the younger generation began to change and the social cohesiveness of the community began to weaken, the heart disease rates in Roseto climbed to levels comparable to those in the surrounding communities. The researchers determined that social connectedness was the buffering factor against heart disease.

Source: "People Who Need People Are the Healthiest People: The Importance of Relationships," by B. Hafen & K. Frandsen, in *Mind/Body Health* (5th ed.), by K. Karren, N. Lee Smith, & K. Gordon (Glenview, IL: Pearson, 2014).

the independence of moving from home, relationships with family and siblings can change significantly. Throughout life, the close relationships we develop and keep are integral in shaping who we become and how we deal with life.

Tip: Map out your current social relationships. Earlier in the chapter, you determined to whom you go for specific types of social support. Now consider each person that makes up your network of relationships. Remember that not all relationships are supportive. Consider the positive and negative aspects of each of your relationships. Does the relationship give you energy or drain you of energy? Does the person help relieve your stress or contribute to increased stress?

FYI

Family Rituals

In a study of children with cancer, when children and parents reported higher levels of family rituals, they also reported more family cohesion and hope, which were linked to a better quality of life.

Source: *"Family Rituals and Quality of Life in Children With Cancer and Their Parents: The Role of Family Cohesion and Hope," by S. Santos, C. Crespo, M. C. Canavarro, & A. E. Kazak,* Journal of Pediatric Psychology, 40(7) (2015): 664–671.

> Man is but a network of relationships, and these alone matter to him.
>
> —*Antoine de St. Exupery*

Even though it isn't always easy to build or maintain friendships, it is clear that good friends are good for your health. Friends can help you celebrate good times and provide support during bad times. Friends prevent loneliness and give you a chance to offer needed companionship, too. They can also:

- Increase your sense of belonging and purpose.
- Boost your happiness and reduce your stress.
- Improve your self-confidence and self-worth.
- Help you cope with traumas, such as divorce, serious illness, job loss, or the death of a loved one.
- Encourage you to change or avoid unhealthy lifestyle habits, such as excessive drinking or lack of exercise.[10]

You would do well to choose friends around whom you can be yourself. To continually try to be someone you're not, to try to live up to someone else's expectations or standards of how you should or shouldn't be, can be stressful. A wise person once said, "A true friend is someone who thinks you're a good egg even though he knows you're slightly cracked."

Despite the potential for stress in close personal relationships, it is increasingly evident that long, healthy lives depend on strengthening our bonds with others. A full and rewarding social experience can nourish the mind, the emotions, and the spirit, and good physical health depends as much on these aspects of our self as it does on a strong, well-functioning body.[11]

Relationships with Pets

As most pet-lovers know, stress-relieving, loving relationships are not limited to humans. Sometimes pets are better than people for improving our mood. Research shows that owning

STRESS STUDIES

Embracing Community Helps Us Live Longer and Be Happier

Scientists began tracking the health of 268 Harvard male sophomores in 1938 during the Great Depression, hoping the longitudinal study would reveal clues to leading healthy, happy lives. They eventually expanded their research to include the men's offspring, who now number 1,300 and are in their 50s and 60s, to find out how early life experiences affect health and aging over time.

Over the years, researchers have studied the participants' health trajectories and their broader lives, including their triumphs and failures in careers and marriage. The findings have produced startling lessons, and not only for the researchers. "The surprising finding is that our relationships and how happy we are in our relationships has a powerful influence on our health," said Robert Waldinger, a psychiatrist at Massachusetts General Hospital and a professor of psychiatry at Harvard Medical School, and director of the study. "Taking care of your body is important, but tending to your relationships is a form of self-care too. That, I think, is the revelation."

Close relationships, more than money or fame, keep people happy throughout their lives, the study revealed. Those ties protect people from life's discontents, help to delay mental and physical decline, and are better predictors of long, happy lives than are social class, IQ, or even genes.

Researchers who have pored through data, including vast medical records and hundreds of in-person interviews and questionnaires, found a strong correlation between men's flourishing lives and their relationships with family, friends, and community. Several studies found that people's level of satisfaction with their relationships at age 50 was a better predictor of physical health than was their cholesterol level.

"When we gathered together everything we knew about them about at age 50, it wasn't their middle-age cholesterol levels that predicted how they were going to grow old," said Waldinger in a popular TED Talk. "It was how satisfied they were in their relationships. The people who were the most satisfied in their relationships at age 50 were the healthiest at age 80."

The researchers also found that marital satisfaction has a protective effect on people's mental health. People who had happy marriages in their 80s reported that their moods didn't suffer even on the days when they had more physical pain. Those who had unhappy marriages felt both more emotional and physical pain.

Those who kept warm relationships had longer and happier lives, said Waldinger, and the loners often died earlier. "Loneliness kills," he said. "It's as powerful as smoking or alcoholism."

According to the study, those who lived longer and enjoyed sound health avoided smoking and alcohol in excess. Researchers also found that those with strong social support experienced less mental deterioration as they age.

"When the study began, nobody cared about empathy or attachment," said Vaillant. "But the key to healthy aging is relationships, relationships, relationships."

The study showed that the role of genetics and long-lived ancestors proved less important to longevity than the level of satisfaction with relationships in midlife, now recognized as a good predictor of healthy aging.

Source: *"Good Genes Are Nice, but Joy Is Better," by Liz Mineo,* The Harvard Gazette, *April 11, 2017, retrieved June 20, 2019, from https://news.harvard.edu/gazette/story/2017/04/over-nearly-80-years-harvard-study-has-been-showing-how-to-live-a-healthy-and-happy-life/.*

a pet, which constitutes a giving and receiving relationship, has long-term health benefits. Pet owners have longer lives and fewer symptoms of stress than those who do not own pets. When you pet a kitten or run with a dog, you are a lot less likely to feel tense or stressed. This is a form of social interaction with no pressure to meet anyone's expectations.

Pet therapy has been useful in dealing with emotional problems in people of all ages and situations. Elderly people are given pets to curb loneliness and take their minds off their own conditions. People who are depressed are given pets for the same reasons. Kids enjoy pets to learn to serve and care for another life. Across the life span, pets give you love and are a source of stress-relieving comfort.

Alena Ozerova/Shutterstock.com

As most pet-lovers know, stress-relieving, loving relationships are not limited to humans.

Relationships in Marriage

If pets sometimes supply more support than a spouse, these people might turn to John Gottman's Love Lab for some help. Gottman, a clinical psychologist and professor of psychology at the University of Washington, has been studying conflict in relationships. In his physiology lab, nicknamed the Love Lab, he observes how people behave within relationships. The research suggests that even though disagreements are not pleasant, they are

STRESS STUDIES

The Mood-Boosting Power of Pets

Pets have evolved to become acutely attuned to humans and our behavior and emotions. Dogs, for example, are able to understand many of the words we use, but they're even better at interpreting our tone of voice, body language, and gestures. And like any good human friend, a loyal dog will look into your eyes to gauge your emotional state and try to understand what you're thinking and feeling (and to work out when the next walk or treat might be coming, of course).

Pets, especially dogs and cats, can reduce stress, anxiety, and depression, ease loneliness, encourage exercise and playfulness, and even improve your cardiovascular health. Caring for an animal can help children grow up more secure and active. Pets also provide valuable companionship for older adults. Perhaps most importantly, though, a pet can add real joy and unconditional love to your life.

Studies have found that:

- Pet owners are less likely to suffer from depression than those without pets.
- People with pets have lower blood pressure in stressful situations than those without pets. One study even found that when people with borderline hypertension adopted dogs from a shelter, their blood pressure declined significantly within five months.
- Playing with a dog or cat can elevate levels of serotonin and dopamine, which calm and relax.
- Pet owners have lower triglyceride and cholesterol levels (indicators of heart disease) than those without pets.
- Heart attack patients with pets survive longer than those without.
- Pet owners over age 65 make 30% fewer visits to their doctors than those without pets.
- While people with pets often experience health benefits, a pet doesn't necessarily have to be a dog or a cat. Even watching fish in an aquarium can help reduce muscle tension and lower pulse rate.

One of the reasons for these therapeutic effects is that pets fulfill the basic human need for touch. Even hardened criminals in prison show long-term changes in their behavior after interacting with pets, many of them experiencing mutual affection for the first time. Stroking, hugging, or otherwise touching a loving animal can rapidly calm and soothe you when you're stressed or anxious. The companionship of a pet can also ease loneliness, and most dogs are a great stimulus for healthy exercise, which can substantially boost your mood and alleviate depression.

Source: *"The Mood-Boosting Power of Pets," by L. Robinson & J. Segal,* HelpGuide: Your Trusted Guide to Mental Health & Wellness, *(October 2019), retrieved from http://www.webmd.com/balance/news/20081226/pets-comfort-college-students.*

necessary for all good marriages. But, although Gottman found that conflict is common in relationships, he also found that only 31% of conflicts get resolved throughout the life of a marriage. The other 69% continue as unsolved problems.[12]

Gottman and his research partner, Robert Levenson, developed a model that can predict the likelihood of marital bliss with more than 90% accuracy.[12] They found that couples who have successful marriage unions maintain the *5-to-1 ratio:* Stable relationships have 5 times as many positive factors—love, affection, interest in one another, humor, and support—as negative factors. Maintaining a consistent balance of 5 loving or kind events for every instance of anger, contempt, or complaints keeps a marriage relationship healthy. Success is based on more positive factors than negative factors.

The research suggests that people should first select a mate with whom inevitable annoyances can be managed, and then learn how to manage the conflicts. The couple must realize that not all their problems will be solved. The key to success or failure in a relationship is how the couple manages the inevitable differences that arise in any situation.

FYI

The "Big 5" of Relationship Stressors

For couples, the "Big 5" of stressors in a relationship are:

1. Power and control issues.
2. The children.
3. Money.
4. Division of responsibilities.
5. Sex.

ESB Professional/Shutterstock.com

Being happily married contributes to health and well-being.

Love and Relationships

In his bestselling book, *The Five Love Languages,* Gary Chapman explains that people have a need to feel loved and that relationships are nurtured when we understand how to give and receive love.[13] When this need is not met, the relationship suffers no matter how committed the partnership. Just as we need gas to keep our cars running, people who have empty "love tanks" will feel unloved or unappreciated.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

Chapman discusses how to keep the love tank full to nurture a healthy, successful relationship. The key to a flourishing relationship is to figure out what your partner needs to feel most loved, and then do those things. Chapman suggests that people express and receive love in different ways, which he calls “love languages.” He proposes 5 love languages: words of affirmation, quality time, gifts, acts of service, and physical touch.

Words of Affirmation People like to be complimented. Compliments boost our confidence and self-esteem. Words of affirmation, such as “You look great today” or “Thank you for taking out the garbage,” which verbally communicate love and appreciation are essential. Another form of words of affirmation is to encourage partners to pursue their dreams even though they may feel insecure about the journey.

Quality Time Quality time means giving someone your undivided attention. It means more than merely being in the same house with someone at the same time. It means taking a walk together, or having a talk without interruption or while you’re watching TV. Quality time means doing something wholeheartedly with your partner that he or she wants to do, but you are less enthusiastic about, such as going to the symphony or the ballet, or going on a picnic. Chapman states, “A central aspect of quality time is togetherness. I do not mean proximity . . . Togetherness has to do with focused attention.”[13] You can spend quality time with a partner by simply being “alone together,” with no outside distractions, engaging in quality conversation with a balance of talking and listening, and finding activities that both of you thoroughly enjoy.

Receiving Gifts Gifts are visual symbols of love. Gift giving is less about the cost of the gift and more about the intention of giving love. Whether gifts are made or purchased, they are visible signs of love that are appreciated by those who receive them.

Acts of Service Acts of service are things you do for your partner that you know they would like you to do. Acts of service require thought, planning, time, effort, and energy. If they are done with a cheerful attitude, they are expressions of love. Acts of service may involve departing from the typical husband and wife stereotypes. An individual whose love language consists of acts of service will feel loved if the partner helps with things such as cooking, cleaning, yard work, or home maintenance, no matter what role the partner believes he or she should play in the relationship.

Physical Touch Physical touch is a common expression of love. Hugging, kissing, and holding hands are familiar ways to express emotion. Some may consider physical touch as their love language because sex is such an essential part of their relationship. But sex is only a small part of physical touch and is not necessarily a love language. Physical touch can be used to express many forms of emotion.

Determining Your Love Language After looking at the 5 types of love language, how do you decide which is your primary love language? Chapman suggests that you ask yourself the following questions:[13]

1. What does your partner do or fail to do that hurts you most deeply? The opposite of what bothers you most is probably your love language.
2. What have you most often requested of your partner? The thing you request most often is likely the thing that would make you feel the most loved.
3. In what way do you express love to your partner regularly? Your method of expressing love may indicate what would also make *you* feel loved.
4. Think back to a time in your life when you felt totally and completely loved. Which of the love languages were you receiving at that time?[12]

Once you have determined your preferred love language(s) (you probably have more than one), pass along this vital information to the person with whom you have a deep relationship. If you don’t let your partner know, the chances are your love tank won’t get filled. To enhance your relationship even more, find out your partner’s love language so you can fill his or her love tank as well. As you do, your relationship will flourish and continue to grow and develop.

After you have figured out your and your partner’s love language, do the same with other relationships in your life. Discover the love languages of your parents, grandparents,

STRESS STUDIES

Social Ties Affect Our Health!

Wide-ranging research suggests that strong social ties are linked to a longer life. In contrast, loneliness and social isolation are linked to poorer health, depression, and increased risk of early death. Physical contact—from hand-holding to sex—can trigger the release of hormones and brain chemicals that not only make us feel great but also have other biological benefits.

Marriage is one of the most-studied social bonds. "For many people, marriage is their most important relationship. And the evidence is very strong that marriage is generally good for health," says Dr. Janice Kiecolt-Glaser, an expert on health and relationships at Ohio State University. "But if a relationship isn't going well, it could have significant health-related consequences."

Married couples tend to live longer and have better heart health than unmarried couples. Studies have found that when one spouse improves his or her health behaviors—such as by exercising, drinking or smoking less, or getting a flu shot—the other spouse is likely to do so, too.

When marriages are full of conflict, though, such health benefits may shrink. In NIH-funded studies, Kiecolt-Glaser and her colleagues found that how couples behave during conflict can affect wound healing and blood levels of stress hormones. In a study of more than 40 married couples, the researchers measured changes to body chemistry over 24 hours both before and after spouses discussed a conflict. The troublesome topics included money, in-laws, and communication.

"We found that the quality of the discussion really mattered," Kiecolt-Glaser says. Couples who were more hostile to each other showed much larger negative changes, including big spikes in stress hormones and inflammation-related molecules. "In the more well-functioning marriages, couples might acknowledge that they disagree, or find humor in the situation, but they don't get sarcastic or roll their eyes when the other is talking," Kiecolt-Glaser says. In a related study, blister wounds healed substantially more slowly in couples who were nastier to each other than in those who were kinder and gentler during difficult discussions.

Other types of relationships are essential, too. These can include friends, family, neighbors, co-workers, clubs, and religious groups. Studies have found that people who have more extensive and more diverse types of social ties tend to live longer. They also tend to have better physical and mental health than people with fewer such relationships. Social support may be especially protective during difficult times.

Dr. Sheldon Cohen, a psychologist at Carnegie Mellon University in Pittsburgh, has been exploring the links between relationships and health for more than 3 decades. In one study, his team exposed more than 200 healthy volunteers to the common cold virus and observed them for a week in a controlled setting. "We found that the more diverse people's social networks—the more types of connections they had—the less likely they were to develop a cold after exposure to the virus," Cohen says. He and his team have since found evidence that people with more types of connections also tend to have better health behaviors (such as not smoking or drinking) and more positive emotions.

Social ties can have mixed effects on our health. But overall, research suggests that the benefits of interactions with others can outweigh any risks. "It's generally healthy for people to try to belong to different groups, to volunteer in different ways, and be involved with a church or involved in their neighborhood," Cohen says. "Involvement with other people across diverse situations clearly can have a very potent, very positive effect on health."

Source: *"Do Social Ties Affect Our Health? Exploring the Biology of Relationships,"* NIH News in Health *(70) (February 2017), retrieved on December 4, 2019, from https://newsinhealth.nih.gov/2017/02/do-social-ties-affect-our-health.*

siblings, children, best friends, and acquaintances. It follows that if you share your love in the ways others prefer to receive it, the quality of all of your relationships can thrive.

Tip: If you are in a loving relationship with someone, what do you think his or her primary love language is? Make and carry out a plan to do something out of the ordinary to express your love in the language that is most important to your partner.

13.4 Communication

One of the most important qualities for a relationship to survive and thrive is effective communication. Relationships develop through communication. If we were unable to communicate, there would be no relationships. Author and educator Leo Buscaglia[8] suggests that the most important quality of a working relationship is communication. In order of importance, the qualities that support a working relationship are:

1. Communication
2. Affection
3. Compassion/forgiveness
4. Honesty
5. Acceptance
6. Dependability
7. Sense of humor

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

8. Romance (including sex)
9. Patience
10. Freedom

These desirable features of a good relationship all have an element of communication. According to Buscaglia, the qualities believed to be most destructive to a loving, growing, mature relationship are:

1. Lack of communication
2. Selfishness
3. Dishonesty
4. Jealousy
5. Lack of trust

Communication happens in many ways. We receive one-way communication through television, the Internet, iPods, radio, and a variety of other media. Two-way communication happens when we talk with each other face to face, or by phone, e-mail, texting, or social media. Communication occurs both verbally and nonverbally. Communication involves both a sender and a receiver of information.

Communication between people is not always entirely clear. The sender may not deliver the message with the precise meaning intended. The person receiving the message may not capture the real essence the sender of the message meant to give. The message still has room for interpretation. The imperfection of communication is often a source of stress and frustration.

Listening

Communication takes place from the day we are born. Communication may even be happening between mother and child while the unborn baby lives inside the womb. We learn to speak while we are very young. As we get older, we learn how to read and write. During our earliest years, we learn to observe others. We learn about body language and silent nonverbal communication. From our very first days, we also learn to listen. Of these modes of communication, listening is probably the type of communication for which we receive the least amount of training.

Lack of listening skills may be one of the most significant obstacles to effective communication. In his bestselling book *The 7 Habits of Highly Effective People*, Stephen Covey stated, "The single most important principle in the field of interpersonal relations is this: Seek first to understand, then to be understood. Most people listen, not with the intent to understand, but with the intent to reply."[14] We can avoid a lot of stress in relationships when we listen empathically rather than autobiographically.

Autobiographical Listening We often listen in the way that Covey calls **autobiographical listening.** In this type of listening, we listen from the perspective of our own experience. We listen autobiographically in the following 4 ways:

1. We *evaluate or judge*. Evaluation or judging happens when we view a person or situation according to *our* experience, and we attach a judgmental label. We don't try to see the entire picture from the other person's mindset or perspective. An example would be when a person relates a recent experience, and the listener responds by saying, "You're so dumb for doing what you just did."
2. We *probe*. In probing, we try to dig out information in the form of a question. Probing seems as if we are seeking to understand, but the questions we ask come from our experience, not from the other person's point of view. The person may not be ready to reveal the information yet. When we probe, we are trying to pull information out of the other person at *our* pace rather than his or hers. An example: A person is telling you a story about how she got into a heated argument with someone in her family and it resulted in a rift in the relationship. A probing question would be, "How long did the argument last?"
3. We *advise*. In advising, we prescribe a course of action; we let the person know of an appropriate action to take based on our knowledge of the situation. Unfortunately, the

person may not be ready for a specific direction, or the advice might be inappropriate if the advisor does not yet know all the pertinent information. Often, we mean well, but advice almost always comes from our own experience and biases, which may be entirely wrong for the other person.

4. We *interpret*. Interpreting means explaining the behavior of another person in terms of *our* motives—explaining to the person why he did what he did. This might have the effect of making the other individuals feel that they are not responsible for their actions. They may feel manipulated or insulted.

In short, autobiographical listening often results in a lack of clear understanding, and the speaker not feeling heard.

Antonio_Diaz/iStock/Getty Images

Empathic listening is active listening with the intention and commitment of genuinely understanding what the person says and how he or she feels.

Empathic Listening Most of the time, we don't listen empathically, which is the most advanced form of listening. **Empathic listening** is active listening with the intention and commitment to genuinely understand what the person is trying to say. It involves focusing on what the other person says, and feels, rather than what we are going to say next. Covey believed that empathic listening is the key to better communication, leading to better understanding, and, as a result, leading to better relationships.[14] At the root of many relationship problems is the feeling that "he or she doesn't understand me." When we actively try to understand other people, respecting their frame of reference and uniqueness, we give them the freedom to say what they really think and feel. This affirms them and fosters the relationship.

When we listen empathically, we do our best to express the other person's point of view better than they do. We try to listen to more than the words the other person says. We strive to determine what he or she is feeling. Empathic listening has the following 4 stages:

> *Stage 1: Mimic the content of the communication.* Simply repeat what is said. For example, if someone says, "I enjoy this class, but I don't feel challenged," you would say, "You like this class, but you don't feel it challenges you." To mimic, just listen and repeat what is said. At this stage, you aren't focusing on feelings.
>
> *Stage 2: Rephrase the content.* Put the other person's meaning in your own words. This involves more than merely mimicking the content. For example, if the other person says, "It really sucks that I got a D on my last test because the grade I get in this class can ruin my overall GPA." To rephrase the content, you might respond by saying, "Your GPA is going to suffer because you're getting a low grade in this class." Notice, as you rephrase the content in your reply, how he is likely to feel. You aren't trying to help him feel differently or tell him what he should do to fix it, or any other autobiographical form of listening. All you are doing is letting him know you are listening.
>
> *Stage 3: Reflect feeling.* In this stage, you listen and look to the nature of the emotion behind the communication, including observing facial expression, body language, and voice (tone, intensity, and volume). You are trying to understand how the speaker feels. For example, someone might say, "I talked with my professor about how I might be able to improve my grade. She got mad, jumped all over me about how poorly I had done during the semester, and said I didn't deserve any leniency." Reflecting the emotional content, you could say, "It sounds like you're upset and frustrated." When you reflect the speaker's feelings, without adding any autobiographical response, the speaker feels heard and understood.
>
> *Stage 4: Rephrase the content and reflect the feeling.* Combine stages 2 and 3 by putting the other's verbal meaning and emotional content *both* in your own words. Using the example in stage 3, you might say, "It frustrates you when you get reprimanded for seeking information." Remember—you are not agreeing or disagreeing. You are only trying to reflect to the other person your understanding of what she said and how she *feels*.

Empathic listening is not appropriate in all situations. It is most effective when the communication has a strong emotional component, when we are not sure that we understand, and when we are not sure the other person feels confident that we understand. We do not have to listen empathically when the conversation deals primarily with facts or logic.

For example, if you were talking about who won the World Series last year or where you are going to eat later today, listening empathically probably would be counterproductive. However, the moment that the speaker becomes emotional about something, empathic listening becomes the more appropriate way to listen. Assess carefully to determine if what initially is a non-emotional issue actually may be charged with emotion.

The critical component of empathic listening is not the technique you use, but the attitude you project. Communicating an attitude of caring and a sincere desire to understand creates the possibility of developing the relationship.

Here are some tips for becoming a better listener:

- *Listen more, talk less.* You can't get to the root of a problem if you're doing all the talking. Listening sends the important message to the other person that he or she is worth listening to.
- *Suspend judgment.* You may agree or disagree with the other person. When you seek understanding, you aren't concerned with right or wrong.
- *Look for interesting aspects of the other person.* Ask the other person questions that will elicit more thought-provoking answers. Enjoy learning about this person.
- *Avoid giving advice.* What may be right for you may be entirely wrong for someone else. As much as you want to help solve problems, you might be doing more harm than good by trying.
- *Allow moments of silence.* Don't fear silent pauses. Sometimes people have to think about how they really feel. If they aren't allowed space to speak because you quickly fill in the gap, they may not take the time to let their real feelings come to the surface.
- *Listen with your eyes and your heart as much as your ears.* Pay attention to body language, voice tone, how rapidly the other person speaks, and other nonverbal signals.
- *Use appropriate body signals.* Let the other person know you are interested through nonverbal signals (facing the other person, using eye contact) and verbal signals ("yes . . . uh-huh . . . I see").

Empathic listening is an essential tool to enhance clear communication. Using the techniques of effective communication can reduce stress and improve the quality of relationships.

Just Listen

Why won't you just listen?
That's all I ask of you.
I don't need to hear what you think about what I say.
I don't need you to think of something clever to comfort me.
I just need you to listen.
So, when I say, "I need to talk," that's what I mean.
I just want to tell you something.
You will have your turn later to talk, but for now, just listen to me.
I don't need your clever advice, for if that's what I wanted, I would write to Dear Abby.
You don't understand that I just want you to listen, nothing more.
You not talking, and just hearing what I have to say . . .
It is worth more to me than any advice you could ever give.
Me just listening to myself say my problem out loud can help me solve it sometimes.
And if I do need your advice, I will ask.
But until I do ask for your advice, just listen.
So please, oh please, don't try to solve my problems for me,
Just listen.

—Anonymous

STRESS STUDIES

A Hug for Health

The evidence is clear: Social support is protective against the harmful effects of stress. To explore social support more thoroughly, researchers sought to find out if receiving hugs is a useful form of social support. At the beginning of this study, 406 healthy adults assessed their levels of social support via a questionnaire. For the next 14 days, the participants gave information by telephone about the levels of social support and the levels of conflict that happened during their days. The participants also kept track of the number of hugs they received on each of the 14 days.

Next, the participants were exposed to a virus that causes a common cold. They were then monitored in quarantine to assess infection and illness signs. The results showed that people who perceived that they had more significant social support, even with higher levels of conflict, showed less sickness than those who reported less social support. Hugging had a similar effect. Those who received more hugs showed fewer symptoms of illness than those who received fewer hugs.

These results indicate that both social support and hugging—as a positive way to demonstrate social support—are beneficial for the immune system.

Source: *"Does Hugging Provide Stress-Buffering Social Support? A Study of Susceptibility to Upper Respiratory Infection and Illness," by S. Cohen, D. Janicki-Deverts, R. B. Turner, & W. J. Doyle,* Psychological Science *26(2) (2015): 135–147.*

Touch

Much of what we communicate in relationships relates not to words but to actions. You may have heard the adage, “Your actions speak so loudly that I can’t hear a word you’re saying.” Touch as a form of non-verbal communication is especially powerful in influencing stress.

Human touch helps support many of our social and emotional bonds in all areas of life, ranging from intimate romantic bonds to kinship and friendships. Postnatal skin-to-skin contact promotes mother-infant bonding, and the quantity and quality of human touch are positively associated with relationship satisfaction in adult romantic couples.[15]

According to Elaine Yarbrough, president of the Yarbrough Group business communication company, touching varies from region to region within the United States. Among her findings, she noted that the South touches more than the North. Generally, the East Coast isn’t a “touching region,” but some populations—such as Jewish communities—are more touch-oriented. The West, says Yarbrough, is too diverse to say one way or the other.[8]

Touch is one of the ultimate expressions of caring relationships. A substantial body of research in both animals and humans supports the fact that caring touch is necessary for emotional health. A classic study found that when young monkeys are deprived of contact, they grow up with a variety of psychological abnormalities that lead them to be aggressive and incapable of exhibiting warmth and affection toward their offspring.[16]

Could something as simple as a pat on the back, shaking a hand, or a gentle hug make a difference? Through the sense of touch, messages from the external environment come to the attention of the body and mind. A welcome touch can make that message positive by reinforcing our sense of social support.

Men and Women—Different Can Be Good

In communication and relationships, males and females generally differ. In Chapter 3, you learned about the “tend and befriend” response. Studies suggest that males are more likely to prepare to fight or flee when they encounter a stressor, and females are more likely to tend to and protect their loved ones and seek social support from other trusted females (befriend). Some evidence shows that we learn these responses at an early age. Boys report that they have fewer people they feel comfortable turning to for support than girls do. Rather than turning to family and friends for help, boys are more likely to turn to exercise, enjoying the social nature of activity as a means of coping. Girls tend to spend more time on social media as a way of relaxing and shutting out the life they experience as being stressful and demanding.[17]

Photocreo Michal Bednarek/Shutterstock.com

When young monkeys are deprived of touch, they grow up with a variety of emotional abnormalities.

Stephen Bures/Shutterstock.com

A loving relationship between mother and baby monkey. Safe and secure babies become healthy adults.

Dr. John Gray is an expert in the field of communications and author of the best-seller *Men Are from Mars, Women Are from Venus.* In working with scores of people who struggle with relationship problems, he found interesting differences in how men and women deal with stress. Based on his experience, Gray believes that when women are stressed, they tend to feel a need to talk about their feelings. Women may be less concerned with finding solutions than with finding relief by expressing their concerns and feeling understood.[18]

By contrast, he found that when men get upset, they are less likely to talk about their concerns. Men tend to think about the problem, mulling it over to find a solution. If they can't find a solution, they are likely to do something to forget the problem, such as read the news, watch a football game, or mow the lawn. By disengaging the mind from the issues of the day, they can relax. If a man's stress is really high, he gets involved with something even more challenging, such as racing a car, competing in a contest, or climbing a mountain.[18]

Although Gray's idea about how men and women deal with stress and how they prefer to be treated when they are stressed is a generalization, the point he makes throughout his book is that people respond to stressors in different ways. If we don't respond lovingly in a way that resonates with them, the loving gesture may not be perceived as such.

It is essential to be aware that people do not see things the same way, nor do they require the same responses to feel listened to and supported. The key is to respect and appreciate the differences in each person. Too often, we mistakenly believe that we can understand how another person truly thinks and feels. Despite our best efforts, conflict in relationships happens. These tools help minimize the stressful nature of the conflicts.

13.5 Managing Conflict

If you're in a relationship, you'll probably experience conflict. **Conflict** is an expressed struggle between at least 2 independent parties who perceive incompatible goals, scarce rewards, and interference from the other party in achieving their goals.[19] When a conflict can be described in a clear, concise way, the parties stand a better chance of solving the problem before it becomes unsolvable or destructive.

Each of us perceives the world a bit differently. Gender, ethnicity, culture, and years of life experiences influence the way individuals view their world. Because perception is so individualized, even people who have pledged their love to each other have disagreements.

Conflicts arise everywhere—within a family, at school, in the workplace, and among groups in our society. Most of our relationships are not intimate or personal. Of all communication, 90% involves sharing *impersonal* information in the course of managing daily life.[20] No matter where a conflict arises, or whom it is with, tensions must be faced and handled.

Occasionally, conflict leads to stressful outcomes such as aggression, anger, damaged relationships, violence, and even war. But conflict can be constructive. Confronting disagreements through productive communication can lead to growth and enhanced relationships. Conflict is not an enemy. Differences of opinion present an opportunity to consider solutions that otherwise would not be examined or explored. Sharing feelings and concerns can strengthen relationships. Conversely, relationships can be destroyed by prolonged conflict unless the parties agree to resolve points of contention constructively.[21] The key to whether the outcomes are useful or destructive is how the conflict is managed.

Expressing your views in a clear, bold manner can strengthen communication. **Assertiveness,** or assertion, means standing up for personal rights and expressing thoughts, feelings, and beliefs in direct, honest, and appropriate ways that do not violate another person's rights. Assertiveness is constructive when facing differences and conflicts with others.

Styles of Conflict Resolution

According to the Thomas-Kilman Mode Instrument,[22] conflicts can be handled through 5 different styles of conflict resolution. Different situations and different people require different techniques. Too often, individuals get stuck using a limited number of methods and applying them inappropriately to resolve conflict. Although there is no right or wrong style, it is helpful to understand the level of importance a person places on the needs or goals involved in the conflict. Once you have this understanding, you can apply the appropriate method of conflict resolution at the right time. Let's explore how this works.

Lilu330/Shutterstock.com

Turtle

1. Avoidance style of conflict resolution.

The avoidance style is unassertive and uncooperative. When individuals do not pursue their own concerns or those of the other person, they do not address the conflict but, rather, sidestep, postpone, or simply withdraw. Common characteristics of someone using the "turtle style" of conflict management—turtles prefer to hide and ignore conflict rather than resolve it—are these:

- Is non-confrontational
- Denies issues that are a problem
- Is highly dependent without inner direction
- May postpone conflict or avoid it at all costs
- Moves away, leaves, or loses

It is appropriate to use the avoidance approach in the following situations:

- When the stakes aren't that high, and you don't have anything to lose; when the issue is trivial
- When you don't have time to deal with it; when more important issues are pressing
- When the context isn't suitable; it isn't the right time or place
- When you see no chance of getting your concerns met
- When you would have to deal with an angry, hot-headed person
- When you are unprepared, taken by surprise, and need time to think and collect information
- When you are too emotionally involved, and the others around you can solve the conflict more successfully

Avoidance in action: Stephanie recently lost her job and was concerned about whether she would have enough money for next semester's tuition. Her friend Megan had called her 3 times during the same day wanting to know if she should try to line up a date for Stephanie for the coming weekend. Stephanie felt she had more important things to worry about than dating, so she didn't answer the phone or return Megan's messages.

illustratioz/Shutterstock.com

Teddy Bear

2. Accommodating style of conflict resolution.

The accommodating style is unassertive and cooperative. This is the opposite of the competing style. An accommodating individual neglects his or her own concerns to satisfy the concerns of the other person. This mode has an element of self-sacrifice. The common term for this type of conflict resolution is *lose-win*. The emphasis of this "teddy bear style" of managing conflict is on human relationships. Common characteristics of a person using this style of conflict management are:

- Is agreeable, non-assertive
- Cooperates even at the expense of personal goals
- Yields; moves toward the other person; friendly

It is appropriate to use the accommodating approach in the following situations:

- When the issue is not as important to you as it is to the other person
- When maintaining the relationship outweighs other considerations
- When you discover that you are wrong
- When continued competition would be detrimental; you know you can't win
- When preserving harmony without disruption is most important; it's not the right time

iofoto/Shutterstock.com

Learning to manage conflict is vital for preventing unnecessary stress.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

Accommodating in action: David and his college roommate disagreed over where in their room to place the new desk the dormitory provided. David prefers to study in the library. He realizes this is not as important to him as it seems to be for his roommate. He accommodates his roommate and lets him decide.

Rizik /Shutterstock.com

Shark

3. Competing style of conflict resolution.

The competing style is aggressive and uncooperative. An individual pursues his or her own concerns at the other person's expense. This is a power-oriented mode in which the person uses whatever force seems appropriate to win his or her position. The common term for this type of conflict resolution is *win-lose.* Common characteristics of someone using the "shark style" of conflict management are:

- Uses power, position, personality, or status to get one's own way
- Commonly reflects a mindset of academics, athletics, and the law
- Is assertive and aggressive
- Is forceful, moving against others

It is appropriate to use the competition approach in the following situations:

- When you know you're right
- When you need a quick decision
- When you meet a steamroller type of person and you need to stand up for your own rights

Competing in action: At the end of the semester, Gabriela was overloaded with homework. Her mother kept calling and leaving messages. She wanted Gabriela to be sure to come home for her birthday, which happened to be in the middle of finals week. Gabriela feared that her mother wouldn't take *no* for an answer, but she understood the importance of finishing her homework before going home on the weekend. She called her mom and said, "Mother, I'm not coming home this weekend, and that's final! I'll hang up the phone if you refuse to take *no* for an answer."

brgfx/Shutterstock .com

Fox

4. Compromising style of conflict resolution.

Compromising is an intermediate position between assertiveness and cooperativeness. Its objective is to find some beneficial, mutually acceptable solution that partially satisfies both parties. It falls in a middle position between competing and accommodating. Compromise gives up more than competing but less than accommodating. Common characteristics of someone using the "fox style" of conflict management are:

- Is assertive but cooperative
- Tries to bargain, compromise, and split the difference

It is appropriate to use the compromising approach in the following situations:

- When the goals are moderately important and not worth using more assertive modes
- When people of equal status are equally committed
- To reach a temporary settlement on complex issues
- To reach desirable solutions on important issues
- As a back-up mode when competition or collaboration don't work

Compromising in action: Karla, a university freshman, eagerly made plans for her family to visit her on campus. Just as the family was ready to leave, her father was called into work unexpectedly. Karla was disappointed, but suggested to the rest of the family that they still come and leave Dad at home for the weekend.

Olena Boiko /Shutterstock.com

Owl

5. Collaborating style of conflict resolution.

The collaborating style is both assertive and cooperative. It is the opposite of avoiding. Collaboration involves an attempt to work with the other person to find a solution that fully satisfies the concerns of both parties. It includes addressing underlying concerns and finding an alternative that meets both sets of concerns. This way of resolving conflicts, commonly known as *win-win*, is usually the most satisfying to all parties involved, with the least residual negative feelings. Common characteristics of someone using the "owl style" of conflict management are:

- Is highly respectful for mutual benefit
- Recognizes the needs and mutual benefit of both parties
- Strives for a win-win outcome and recognizes the abilities and expertise of all persons
- Integrates; works toward the solution with others

It is appropriate to use the collaborative approach in the following situations:

- When others' lives are involved
- When you don't want to have full responsibility
- When an elevated level of trust is present
- When you want to gain commitment from others
- When you need to work through hard feelings or animosity

Collaborating in action: John and Yuna were making plans for a June wedding. They eagerly anticipated their honeymoon until they discovered what each other wanted. John thought they would spend time in Montana at a private ranch near a river where he could spend his days fishing. Yuna had dreamed for years about a honeymoon on the beach in Hawaii. She wanted to bathe in the sunshine during the daytime and enjoy the nightlife at the end of the day. They were faced with a conflict.

Knowing that Montana and Hawaii were distant from each other, John and Yuna researched other places where they could spend their honeymoon. They each set aside their personal desires and listened to what the other person wanted.

After a beautiful June wedding, John and Yuna enjoyed their honeymoon in Florida, where John went deep-sea fishing, and Yuna basked in the sunshine during the day. They both enjoyed Florida's nightlife.

Understanding the appropriate ways to resolve conflicts can make an enormous difference in the stress that we feel. Relationships invariably generate emotions that can run the gamut from ecstasy and joy to heartache and suffering. By applying appropriate solutions to conflicts, we can remain on the more positive end of the emotional rollercoaster that goes with relationships.

13.6 Conclusion

Social support generates a sense of belonging, feeling accepted and loved, and being needed. Our support systems are networks of relationships. From the moment we are born, bonding with our parents starts us down a path of personal relationships that shape our experience of trust and confidence in dealing with life. Supportive, healthy relationships with other people can help protect against stress and are essential for physical, emotional, and social health. Social support can even help us live longer.

Effective communication skills are essential for developing and keeping relationships. Empathic listening is especially helpful to communicate the message that you care, and you genuinely want to understand what the other person says and feels.

Despite our best intentions, conflicts happen in relationships. Understanding conflict-resolution styles can help you decide the best approach to deal with conflicts when they arise.

Take Reza's advice from the opening vignette about being proactive in your relationships. Spend time with the people you care about. Be deliberate in nurturing your relationships using the information in this chapter. In the end, they are what matter most.

> It's not enough to have lived. We should be determined to live for something. May I suggest that it be creating joy for others, sharing what we have for the betterment of personkind, bringing hope to the lost and love to the lonely.
>
> —*Leo F. Buscaglia*

ACTIVITY

13.1 Empathic Listening

Purpose The purpose of this activity is to allow you to practice empathic listening. Use this listening opportunity when another person talks about an emotional issue, rather than about something mundane or an event that has no emotional intensity. Do not tell the person that you are intentionally listening to practice being empathic. For about 30 minutes, simply focus all your listening energy on listening for the single purpose of understanding. Afterward, respond to the following questions, being as thorough with your responses as possible.

1. Describe the situation: Who was involved? What was the main topic of conversation?
2. Describe how you noticed yourself vacillating between listening empathically and listening autobiographically.
3. Describe how the person you were talking with responded to you when you listened with empathy.
4. Describe how easy or difficult you found that it was to listen empathically for that long.

Key Points

- Supportive relationships can serve as a shield to protect us from potential stressors and may be one of the most important ways to prevent stress.
- Social support is a network of relationships that engender a feeling of being cared for and loved. Those in social relationships have a mutual responsibility to each other's well-being.
- Types of social support include instrumental support, emotional support, informational support, and appraisal support.
- Effective communication is one of the essential qualities for a relationship to survive and thrive.
- Empathic listening is active listening with the intention of and commitment to genuinely understanding what the person said and how he or she feels.
- Touch is an essential form of nonverbal communication.
- Men and women may have different ways of wanting to feel loved. Understanding the most effective ways to love and care for your friends and loved ones improves the likelihood that you can help when they feel low and need support.
- Conflict can be constructive. Confronting disagreements through productive communication can lead to growth, change, and improved relationships.
- Five styles of conflict resolution are avoiding, accommodating, competing, compromising, and collaborating.

Key Terms

social support
instrumental support
emotional support
informational support
appraisal support
perceived support
received support
autobiographical listening
empathic listening
conflict
assertiveness

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

References

1. "Differential Impact of Types of Social Support in the Mental Health of Formerly Incarcerated Latino Men," by M. Muñoz-Laboy, A. Perry, & V. Guilamo-Ramos, *American Journal of Men's Health, 8*(3) (2014): 226–239.
2. "A New Look at Social Support: A Theoretical Perspective on Thriving Through Relationships," by B. C. Feeney & N. L. Collins, *Personality and Social Psychology Review, 19*(2) (2015): 113–147.
3. *Work, Stress and Social Support,* by J. S. House (Reading, MA: Addison-Wesley, 1981).
4. "Social Support and Resilience to Stress: From Neurobiology to Clinical Practice," by F. Ozbay, D. C. Johnson, E. Dimoulas, C. A. Morgan, D. Charney, & S. Southwick, *Psychiatry, 4*(5) (2007): 35–40.
5. "Social Support and Health," by J. Holt-Lunstad & B. N. Uchino, in *Health Behavior: Theory, Research, and Practice* (John Wiley & Sons, 2015).
6. *Health and Ways of Living: The Alameda County Study*, by L. Berkman & L. Breslow (New York: Oxford Press, 1983).
7. *Introduction to Public Health* (3rd ed.), by M. Schneider (Boston: Jones and Bartlett, 2011). *The Spirit and Science of Holistic Health,* by J. Robison & K. Carrier (Bloomington, IN: AuthorHouse, 2004).
8. *Loving Each Other: The Challenge of Human Relationships,* by L. Buscaglia (New York: Ballantine Books, 1984).
9. "Friendships: Enrich Your Life and Improve Your Health," retrieved December 3, 2019, from https://www.mayoclinic.org/healthy-lifestyle/adult-health/in-depth/friendships/art-20044860.
10. "Good Genes are Nice, But Joy is Better" by L. Mineo, *The Harvard Gazette,* (April 11, 2017), retrieved November 25, 2019 from https://news.harvard.edu/.
11. "Managing Conflict: Solvable vs. Perpetual Problems," by M. Fulwiler, retrieved December 3, 2019, from https://www.gottman.com/.
12. *The Five Love Languages: How to Express Heartfelt Commitment to Your Mate*, by G. Chapman (Northfield Publishing, Chicago, 1995).
13. *The 7 Habits of Highly Effective People: Audio Learning System Application Workbook*, by S. R. Covey (Provo UT: Covey Leadership Center, 1991).
14. "Topography of Social Touching Depend on Emotional Bonds Between Humans," by J. T. Suvilehto, E. Glerean, R. I. Dunbar, R. Hari, & L Nummenmaa, *Proceedings of the National Academy of Sciences of the United States of America, 112*(45) (2015): 13811–13816.
15. "Harlow's Classic Studies Revealed the Importance of Maternal Contact," *Association for Psychological Science,* (June 20, 2018), retrieved November 25, 2019 from https://www.psychologicalscience.org/.
16. "Strategies of Adolescent Girls and Boys for Coping with School-Related Stress," by M. Wilhsson, P. Svedberg, S. Högdin, & J. M. Nygren, *The Journal of School Nursing, 33*(5) (2017): 374–382.
17. *Men Are from Mars, Women Are from Venus*, by J. Gray (New York: HarperCollins Publishers, 1992).
18. "The Research of Interpersonal Conflict and Solution Strategies," by Y. Bao, F. Zhu, Y. Hu, & N. Cui, *Psychology 7* (2016): 542–545.
19. *The Communication Process: Impersonal and Interpersonal*, by K. M. Galvin & C. A. Wilkinson (Los Angeles: Roxbury Publishing, 2000).
20. "What Type of Communication during Conflict Is Beneficial for Intimate Relationships," by N. C. Overall & J. K. McNulty, *Current Opinion in Psychology, 13* (2017): 1–5.
21. "What's Your Conflict Management Style?" retrieved December 3, 2019, from https://www.waldenu.edu/connect/newsroom/walden-news/2017/0530-whats-your-conflict-management-style.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

chapter 14

Creating a Healing Environment

fotohunter/Shutterstock.com

> I go to nature to be soothed and healed, and to have my senses put in tune once more.
>
> —*John Burroughs*

When I walk into my best friend's apartment, I seem to relax. Something about that place helps me unwind. Do things like color, plants, and light really influence how we feel?

If all this new technology is supposed to help me have more time to relax, why do I feel busier and more stressed than ever?

Is it my imagination, or do I feel more stressed and frustrated in hot weather?

My friend said she read a book on *feng shui* to give her ideas on how to arrange the furniture in her new apartment. What is *feng shui*, anyway?

Learning Objectives

Study of this chapter will enable you to do the following:

14.1 Define what is meant by a "healing environment."

14.2 Describe the role of color, light, odors, air, noise, temperature, nature, and organization in creating a healing environment.

14.3 Explain how a healing environment helps to prevent stress.

14.4 Identify the physiological and psychological impact of increased exposure to technology and how technology can be managed to prevent stress.

14.5 Evaluate your environment to determine the impact your surroundings have on your stress.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

Real People, Real Stories

Home, Sweet Home Joe comes home from classes and throws his jacket on top of the pile on the floor. His dark, cold apartment still smells like old pizza from last night's dinner. Joe just wants to plop down on the couch and relax for a few minutes, but he hasn't checked Instagram all day, and a dozen text messages await, as well. Technology is calling him, and he can't resist the urge.

An hour later, still on social media, Joe gives up on any hope for a nap. He needs to get busy and finish his term paper—but first, he has to find his notes, which are buried somewhere on the kitchen table under old magazines and empty pizza boxes. After a couple of minutes of searching, his phone rings. It's his boss telling him to come in to work early because someone called in sick at the last minute. Joe feels his stress level rising.

14.1 Creating a Healing Environment

Have you ever paused to reflect on the tremendous impact your environment has on your stress? We are not only talking about environmental factors like the weather. Consider your surroundings at home, school, and work. Think about how clutter, noise, and 24/7 social media exposure might affect your stress and quality of life. These influences lurk in the background of our lives. Most of the time, we aren't even consciously aware of them, yet they can impact how we feel. In this chapter, we will explore how we experience the environment through our senses—how what we see, hear, taste, smell, and touch impacts stress. Then, we will look at some innovative research related to how technology increasingly affects our environment, our body and brain, our relationships, and our stress. You might be surprised to learn that, with a few simple tweaks, you can turn your place into a healing, rejuvenating refuge.

14.2 Stress and the Environment

Imagine this scenario: Even though you have studied, you still feel stressed and nervous as you walk across campus to take your math test. You walk into your classroom and immediately begin to relax. The quiet, comfortable room is filled with natural light and painted in a soothing color. The chairs are designed ergonomically for comfort and support and are pleasantly arranged. Headphones are attached to each chair, so you can choose a relaxing tune from a lengthy list of music, or maybe you prefer listening to sounds of nature to block out distracting noises while you take the exam. You breathe in the subtle scent of lavender and feel yourself relaxing with each breath. Does this sound anything like your classrooms? Or do you find that the settings where you take tests increase the stress you already feel?

In the broadest sense, the **environment** includes everything both internal and external to an individual. The **external environment** consists of objects, conditions, and situations that surround us. An **environmental stressor** is some aspect of our environment that we perceive as annoying, distracting, uncomfortable, or stressful. In this chapter, we explore issues of the external environment—our physical surroundings—which may contribute to stress. We will highlight some of the everyday environmental stressors and investigate ways to create a more healing, relaxing environment.

Types of Environmental Stressors

Some environmental stressors—such as a tsunami or a tornado—make the headlines. Other environmental stressors—like the constant hum of machines and the clutter of too much technology—are more subtle. Environmental stressors include the following:

Air pollution
Noise
Overcrowding
Disasters (natural and manmade)
Climate conditions
Lighting
Room colors
Insects
Tobacco smoke
Poor ergonomics
Furniture arrangement
Room clutter
Room temperature
Technology

All these external environmental conditions can play a role in our levels of comfort or discomfort.

Individual Perceptions

Environments are more than merely locations. They hold memories, experiences, energy, and meaning.[1] Like all stressors, environmental stressors differ for each of us. One person may perceive going to a heavy-metal concert and sitting in front of the speakers as enjoyable and relaxing. To another person, this would be one of the most stressful experiences imaginable. Perception is an essential part of whether an environmental factor is stressful. We base our perceptions on our experiences.

Learned Response and the Environment

Imagine this: Your heart pounds, your stomach is in a knot, and you can hardly breathe. You've arrived at the dentist's office! Why would you automatically feel this way? **Learned response theory** helps explain why certain environments can affect us. When a specific environment induces a painful reaction, we create a mental association and might perceive the environment itself as being unpleasant. Merely being in an environment that we associate in our mind with discomfort or pain can elicit the stress response, even when that environment poses no pain or danger.

Dentists often are aware of the learned response and do everything they can to alter their patients' perception of the environment to help them feel relaxed. Relaxing music, entertaining movies, plants, comfortable chairs, and artwork all can help create an environment that is conducive to relaxation. (Of course, advanced pain relief doesn't hurt either!)

Consider a woman who has morning sickness during the early stages of her pregnancy and often shops in a particular mall. Repeated exposure to the mall combined with her morning sickness may trigger the sick feeling each time she goes to the mall in the future. Under normal conditions, a shopping mall would not cause this response, but when 1 condition is paired with another, and pain or discomfort is involved, the first becomes a trigger for a reaction of discomfort.

Managing Environmental Stressors

Many people don't even notice the effect the environment has on them. They get accustomed to living and working in buildings that lack natural lighting, have windows that cannot be opened to let in the fresh air, and are painted in cold colors. Their house may have been built on a small lot with no open space and no room for trees, wildlife, or even grass. Individuals living in Western society often live an existence "disconnected" from the natural world, which can leave them feeling estranged and unfulfilled. They may feel stressed and seek artificial substitutes for natural experiences.[2]

By taking a proactive approach toward environmental stressors, you may be able to reduce or eliminate them. If you can't remove the stressor, try to remove yourself from the environment; or adapt and think differently, so you do not perceive the stressor as painful or uncomfortable. Some stressors in the environment are not in our

FYI

Living Near a Forest Lowers Stress

Noise, pollution, and crowds: Life in a city can feel stressful. People who live in cities are known to be at a higher risk of depression, anxiety, and schizophrenia than people who live in the country. Living close to nature boosts mental health and well-being. Researchers at the Max Planck Institute for Human Development explored this idea and found those city dwellers who live close to a forest appear to cope with stress better than those who didn't live close to a forest. Using magnetic resonance imaging (MRI), the researchers found that, compared to those who didn't have close access to forests, people with a regular connection to a forest showed indications of a physiologically healthy amygdala structure. The amygdala is a part of the brain that plays an essential role in stress processing and reactions to danger. Something is relaxing about spending time among the trees.

Source: *"Life in the City: Living Near a Forest Keeps Your Amygdala Healthier," Max-Planck-Gesellschaft, retrieved November 19, 2019, from https://www.mpg.de/11548547/living-near-a-forest-keeps-your-amygdala-healthier.*

valeriy eydlin/Shutterstock.com

The physical environment surrounding you each day can affect how you feel. Is your environment healing and relaxing, or hectic and chaotic?

CULTURE CONNECTION Healing Color

Color has been an essential part of healing for thousands of years. The ancient Egyptians ascribed healing powers to various colors. In India, colors and specific meanings are assigned to the 12 chakras or energy centers of the body. Archeologists have found that ancient temples were oriented in such a way that light shining through various openings created prisms of light, which shone in individual chambers used for healing the sick.

Source: *Integrative Health: A Holistic Approach for Health Professionals*, by C. Young & C. Koopsen (Boston: Jones and Bartlett Publishers, 2009).

control, but creating a calming, healing environment in our home and in many of our surroundings is usually within our control.

FYI

Healthy Home

Florence Nightingale, the founder of modern nursing, believed that a healthy house had 5 essential characteristics: pure air, pure water, efficient drainage, cleanliness, and light. She felt that no home could be healthy without these and that a home would be unhealthy in proportion to their deficiency.

Source: *http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1645993/. Retrieved March 16, 2014.*

14.3 A Healing Environment

A **healing environment** is one in which individuals are supported and nurtured, in which they feel calm, and in which health and well-being are promoted. These are places or spaces where you feel balanced, relaxed, and comfortable. Healing environments play a vital role in supporting a healthy lifestyle, and they are just as important as eating correctly, exercising regularly, practicing proper healthcare, and having meaningful relationships and support systems. Healing environments promote a sense of relaxation and peace and help revitalize senses that may have been dulled.[3] The creation of a healing environment can occur in any space (even your dorm room) and includes consideration of the following:

- Color
- Light
- Odors and air
- Noise
- Temperature
- Nature
- Organizing and simplifying
- Managing technology

Healing environments engage all 5 senses and can be created in many settings. As we discuss each component, think about your various physical surroundings and what you can do to make them more healing and peaceful. The rest of this chapter explores elements of physical environments that can promote a sense of peace and productivity.

14.4 Color

Studies suggest that different colors can affect your stress levels, your mood, your energy level, and even your behavior. For example, some people associate the color red with feelings of strength, warmth, energy, and stimulation; red has also been associated with feelings of anger or hostility. Blue has been associated with clear thinking and a calm mind. It is also associated with feelings of depression.[4]

Color affects heart rates, brainwave activity, respiration, and muscle tension. Color has meaning to most people, and a lack of color can be a source of stress. Color can make an area feel restful, cheerful, stimulating, or irritating.[2]

Chromotherapy is a specific discipline that uses colors to treat individuals who have certain disorders.[5] Here are some findings related to the use of color:[2]

- Warm colors such as peach, soft yellows, and coral can stimulate the appetite and encourage alertness, creativity, and socialization; these colors are useful in areas such as dining rooms and meeting spaces.

- Blues, greens, violets, and other cool colors are useful in areas designed to be restful, spiritual, contemplative, and quiet, such as bedrooms and meditation areas.
- The primary colors—red, yellow, and blue—and strong patterns are pleasant at first but can be overstimulating and may contribute to fatigue.
- Green symbolizes growth, healing, spirituality, and peace, and has been used to reduce tension and nervousness.
- The brain requires constant stimulation. Monotonous color schemes contribute to sensory deprivation, disorganization of brain function, deterioration of intelligence, and an inability to concentrate. These color schemes slow the healing process and are perceived as "institutional."
- Color affects an individual's perception of time, size, weight, and volume. For example, warm color schemes are better in rooms where social activities such as dining or recreation take place because the activity seems to last longer. In rooms where monotonous tasks are performed, a cool color scheme can make time pass more quickly.[2]

Tip: Create your study and working environments in colors that feel good to you. Some colors, such as dark blue and violet, are known to be more relaxing; others, such as red and orange, can have the opposite effect. Color preferences are highly individualistic, however, so you should choose colors that work for you. If you live in a dorm or an apartment where you are not allowed to paint, hang a large piece of material, such as a blanket or a rug, on the wall.

14.5 Light

Light is a form of electromagnetic energy that can have both positive and negative effects on living organisms.[5] The differences between natural and artificial light are significant when health is concerned. The importance of natural sunlight to well-being has been explored in several studies, including the following:

- Lack of exposure to natural light is related to depression and poor quality of sleep. Exposure to natural sunlight is linked to lower depression levels and better quality of sleep.[6]
- Natural sunlight exposure relates positively to job satisfaction and organizational commitment.[7]
- Seasonal bipolar depression is reduced with brighter lights and sunlight.[8]

In the northern hemisphere, shorter periods of daylight during the winter have been shown to trigger **seasonal affective disorder (SAD).** According to the National Mental Health Association, "SAD is a mood disorder associated with depression episodes and related to seasonal variations of light."[9] Symptoms include depression, irritability, and fatigue. **Melatonin,** a sleep-related hormone, is secreted in increased levels in the dark by a part of the brain called the **pineal gland.** Melatonin may help our bodies know when to go to sleep and when to wake up. Artificial light suppresses the normal nocturnal production of melatonin. Regular exposure to full-spectrum lighting improves SAD by increasing the amount of melatonin produced in the brain.[6]

Ultraviolet light can do the following:[10]

- Elevate mood
- Improve energy
- Induce relaxation
- Treat many skin disorders
- Reduce pain including fibromyalgia

Johner/Johner Images/Getty Images

Natural sunlight contributes to health and healing.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

- Stimulate vitamin D production (vitamin D deficiency is related to many health problems)
- Stimulate white blood cell production
- Increase the release of endorphins
- Lower blood pressure
- Promote emotional well-being[10]

Natural daylight is the best type of light for health, yet many people live and work in environments lit by fluorescent lighting or LED light. Full-spectrum lamps are an alternative to traditional fluorescent lighting. They mimic the spectral qualities of daylight and provide health-promoting effects like those of natural light. The premise is that, because life evolved with daylight, optimal physiological functioning will continue under this type of light.[2]

Although natural light has many health benefits, you might want to control the amount of direct sunlight when you work indoors, to protect your eyes. Use blinds and curtains to create indirect light.

Tip: Spend time outdoors in natural light. Indoors, take advantage of windows for the natural light and the view. Use lighting to draw the eye toward positive, mood-enhancing artwork or views.

14.6 Odors and Air

> Smell is a potent wizard that transports us across a thousand miles and all the years we have lived.
>
> —*Helen Keller*

Aromas can play a role in managing stress. What scents do you associate with relaxed, happy times in your life? Maybe it is the smell of homemade bread or your grandpa's aftershave lotion. Or perhaps it is the pine smell of a Christmas tree, the scent of an ocean breeze, or the smell of a campfire. Research shows the scents we find most relaxing often evoke memories from childhood, like baby powder or chocolate chip cookies.

Smell is analyzed in the limbic part of the brain, an area associated with emotions. It is no surprise, then, that an aroma can affect how we feel. Smell is acutely kept in memory, even more than sounds or visual images, and is frequently associated with an experience.[2] This is a form of learned memory in which the reaction to an odor has been learned through experience. The result may be happiness, or it may be fear, depending on the original experience. Smells can be associated with both positive and negative memories.

A student related in class that even many years later, he felt stressed and nauseous every time he smelled a particular perfume. He associated the scent with a sixth-grade teacher around whom he often felt dumb and embarrassed.

FYI

Smells Good

The natural scent of pine is calming, says Janis Burke, an aromatherapist at Washington State University's College of Nursing. It might be relaxing to replace that old artificial Christmas tree with the real thing during the busy holiday season.

Source: *"100 Ways to Reclaim Your Life," by S. Calechman,* Men's Health *(August 2004): pp. 183–190.*

Aromatherapy

Studies have shown that **aromatherapy,** the therapeutic use of essential oils, can affect stress levels. In one study, aromatherapy (in this case, lavender, roman chamomile, and neroli oil blend) was found to reduce anxiety, increase sleep quality, and stabilize blood pressure.[11]

CULTURE CONNECTION Common Scents

Some older adults in Europe associate lavender with death. Lavender bags were used to keep linen sweet-smelling and moth free. However, if a person was bedridden with an illness, the lavender smell from the bed linens could become a signal of impending death. As the person became sicker, the bedding was changed more often. As a result, the scent of lavender became more prevalent.

Lavender has undergone a tremendous revival with aromatherapy, and it appears to be universally enjoyed by people younger than 60 years of age. However, the association with death may explain why older Europeans do not respond similarly to lavender.

Source: *Mosby's Complementary and Alternative Medicine: A Research-Based Approach* (3rd ed.), by L. Freeman (St. Louis: Mosby, 2009).

Technically, aromatherapy involves the use of essential oils, not just the use of smell. A word of caution: many so-called aromatherapy products on the market contain synthetic aromas. Synthetic aromas have dubious therapeutic effects, and their long-term effects are unknown. Safe, effective use of essential oils requires knowledge of their sometimes powerful effects and their proper administration.

Inhalation is one of the simplest and fastest methods of introducing essential oils into the body. Years of research have shown the physiological and psychological potency of many essential oils and their measurable effects. Aromatherapy has been used to relieve pain, enhance relaxation and reduce stress, relax tense muscles, soften dry skin, and strengthen immunity. The most common uses are to relieve stress and anxiety, chronic pain, depression, and insomnia.[12]

Olinchuk/Shutterstock.com

Aromatherapy uses essential oils to reduce stress levels.

Aromatherapy is used routinely by midwives in many countries, and increasingly in the United States, to reduce anxiety and pain during childbirth. In one study, compared to a control group, aromatherapy was found to reduce the perception of pain and increase the level of comfort and satisfaction during the first stage of childbirth.[13]

Most essential oils from plants and flowers have the potential to reduce stress. Certain essential oils, such as lavender, rose, neroli, and petitgrain, are well known for this characteristic.[12] In one study looking at electroencephalogram (EEG) patterns, jasmine, ylang-ylang, rose, and peppermint produced a more awakened and alert effect with increased beta waves in the brain. Lavender, lemon, and sandalwood stimulated the brain's alpha waves, thereby promoting relaxation and also resulting in improved concentration.[14]

Air Quality

We don't want to forget the benefits of good, clean, fresh air. A good, deep breath of fresh air can clear the mind and calm the body. A study of student performance found that students in classrooms with operable windows progressed 7 to 8% faster on standard tests in 1 year than students in rooms with fixed windows.[15]

Tip: Spend as much of your work or study time as possible in the fresh air. If the weather allows, open the windows. If this is not possible, or if pollution levels are unfavorable, make sure ventilation is adequate, or the room has filters to clean the air. If the air is dry, introduce plants, which give off fresh oxygen and help to absorb air pollutants. They also add to the visual appeal of the environment.

Tip: Reduce exposure to tobacco smoke. Smoking is banned in many areas, but if you find yourself in a place where tobacco smoke isn't banned, reduce your exposure by getting as far away as possible from the smoke, or by using an air purifier to help remove the smoke. Smoke can irritate the eyes, and consistent exposure to tobacco smoke is known to cause respiratory problems, especially in people who already have respiratory concerns such as asthma.

Tip: When creating a healing environment, remember that pleasant odors, flower arrangements, and plants can reduce stress, absorb odors, and help clean the air.

FYI

Indoor Pollution

Americans, on average, spend approximately 90% of their time indoors, where the concentrations of some pollutants are often 2 to 5 times higher than typical outdoor levels. According to the EPA, indoor air pollutants can cause eye, nose, and throat irritation; headaches; loss of coordination; nausea; cancer; and damage to the liver, kidneys, and central nervous system. Examples of indoor air pollutants include dust mites, mold, pet dander, environmental tobacco smoke, cockroach allergens, and carbon monoxide.

Source: *"Report on the Environment: Indoor Air Quality," United States Environmental Protection Agency (EPA). Retrieved November 19, 2019, from https://www.epa.gov/report-environment/indoor-air-quality.*

STRESS STUDIES

The Nose Knows

Magnetic resonance imaging (MRI) is often perceived as stressful because it usually involves lying still in a small, tube-like machine for a time. In a study designed to investigate the effect of using aroma to reduce distress during the administration of MRIs, a pleasant smell was found to reduce the patients' stress and enhance their coping ability. Via a small tube inserted into their nostrils, 57 participants received either heliotropin (a vanilla-like scent) or ordinary air. Patients who received the heliotropin reported 64% less anxiety than the patients who received regular air.

Sources: *"Using Aroma to Reduce Distress During Magnetic Resonance Imaging," by W. Redd & S. Manne in A. Gilbert,* Compendium of Olfactory Research: 1982–1994 *(New York: Olfactory Research Fund, 1995);* Mosby's Complementary & Alternative Medicine: A Research-Based Approach *(3rd ed.), by L. Freeman (St Louis: Mosby, 2009).*

Ghislain & Marie David de Lossy/The Image Bank/Getty Images

We are surrounded by hundreds of potentially stressful sounds every day.

14.7 Noise

The word "noise" is derived from the Latin word "nausea," meaning seasickness. Noise is among the most pervasive pollutants today. Noise from road traffic, jet planes, garbage trucks, construction equipment, manufacturing processes, lawnmowers, leaf blowers, and boomboxes, to name a few, contribute to the audible litter routinely broadcast into the environment. Potentially stressful noise can come from the TV blaring while you try to read, the non-stop talker sitting next to you in the library, your neighbor mowing the yard while you nap in the hammock, or the party going on next door while you try to sleep.

Noise negatively affects human health and well-being. Problems related to noise include hearing loss, stress, sleep loss, distraction, lost productivity, and a general reduction in quality of life and opportunities for tranquility.[16] Loud noises cause hearing loss in an estimated 10 million Americans every year, and noise can harm more than our ears. Noise can raise blood pressure, increase heart rate, and cause muscle tension.[17] It sounds a lot like the stress response.

Noise is measured in **decibels.** Decibels (dB) range from about 20 in a quiet, rural area, to 50 to 70 dB in towns during the daytime, to 90 dB or more in noisy factories and discotheques, to higher than 120 dB near a jet aircraft takeoff.[18] Prolonged exposure to sounds over 85 decibels or brief exposure to louder sounds can damage hearing. Research shows that even low noise levels of 40 to 58 decibels can worsen health outcomes in hospitalized patients.[18] Figure 14.1 illustrates decibel levels.

Whether a sound is loud enough to damage your ears depends on both the loudness level (decibels) and the length of exposure to the sound. In general, the louder the noise, the less time is required to cause hearing loss. According to the National Institute for Occupational Safety and Health, the maximum exposure time at 85 dB is 8 hours. At 110 dB, the maximum exposure time is 1 minute and 29 seconds. If you must be exposed to noise, it is best to limit the exposure time or wear hearing protection.

Perceived Noisiness

One person's noise is another person's music. The subjectivity of sound makes it difficult to determine how much noise pollution is too much, especially as it relates to psychological distress. What is noise to one person can be appreciated sound to another, as the following story illustrates.

A woman was visiting her elderly father-in-law. When they sat in his backyard and tried to visit, she found the neighbor's loud music to be irritating and was sure this would be stressful to her father-in-law. Finally, when her stress level had risen to the point at which she decided to say something, she said, "Dad, how can you stand that noise? It must be so annoying to you!" The elderly gentleman replied, "Not at all. I'm just thankful I can still hear the music."[19]

Noise becomes a stressor when we appraise it as annoying or subjectively decide it is stressful because it interferes with our ability to concentrate, function, or relax. **Perceived noisiness** describes the subjective assessment of noise that combines the decibel level and the context in which noise occurs. Perceived noisiness may be a better predictor of adverse reaction to sound than is loudness.[20] For instance, you might enjoy listening to your roommate play his drums when you're sitting around the dorm in the evening. It is another matter altogether when he decides to practice at 8:00 in the morning!

i FYI

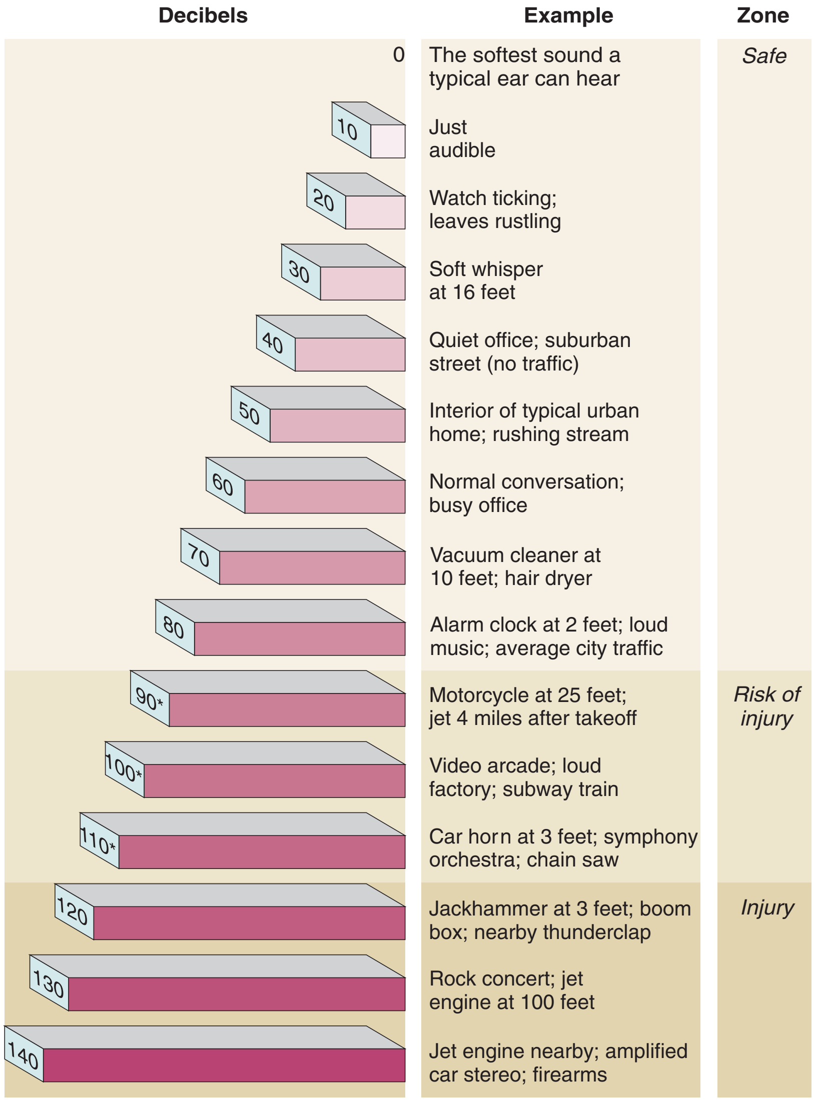
Hear Today, Gone Tomorrow

In a recent study, as many as 1 in 4 college students suffered mild hearing loss. Researchers think some of this loss could be the result of the use of personal music devices and the extended use of earbuds, which deliver sound close to the eardrum.

Source: *"Exposure to Transit and Other Sources of Noise among New York City Residents,"* Environmental Science and Technology, 46(1) *(January 3, 2012): 500–508.*

Effects of Noise

Noise pollution can disturb the nervous system, creating an increase in stress levels. Most of us are not aware of the hazardous effects of noise, yet many studies have associated exposure to noise with increased health risk and decreased well-being. High-volume sound



*Note: The maximum exposure allowed on the job by federal law, in hours per day, is as follows: 90 decibels—8 hours; 100 decibels—2 hours; 110 decibels—1/2 hour.

FIGURE 14.1
Loud and Louder

Source: An Invitation to Health 2009–2010 Edition, *by D. Hales (Belmont, CA; Wadsworth/Cengage Learning, 2009).*

has been linked to high blood pressure and other stress-related problems that can lead to heart disease, insomnia, anxiety, headaches, colitis, and ulcers. Noise frays the nerves; people tend to be more anxious, irritable, and angry when their ears are constantly barraged with sound. Researchers suggest that noise may even be hazardous to unborn babies, especially if it stresses the mother.[21]

Relaxing Sound

Sound can be soothing. A large number of releases are available to supply soothing sounds to help you relax. Typical of these sounds are cascading waterfalls, running streams, a gentle rain, the ocean surf, birds chirping, or the wind blowing. This **white noise** helps to drown out other sounds that may be distracting. Studies show that the sounds of running water may help reduce stress levels.[22] In Chapter 24, you will learn about music as a popular and effective stress reducer.

Tip: Close your eyes and notice the sounds in your immediate environment. First, focus on pleasant sounds (the voice of a loved one or sounds of nature). Next, focus on less pleasant sounds. Make adjustments to reduce or eliminate background noise. Turn

STRESS STUDIES

Silence Is Golden

In a study published in the journal *Brain Structure and Function*, mice were exposed to ambient noise, white noise, pup calls, or silence. The group exposed to silence was initially the control group of the study. But when the groups were compared, the group of mice who were exposed to 2 hours of silence per day developed new cells in the hippocampus, an area of the brain associated with learning, memory, and emotion. The mice exposed to the other noise variations did not develop similar new brain cells.

Source: *"Is Silence Golden? Effects of Auditory Stimuli and Their Absence on Adult Hippocampal Neurogenesis," by I. Kirste, Z. Nicola, G. Kronenber, & T. L. Walker,* Brain Structure and Function, *(2013).*

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

off the TV, radio, and other sources of extra sound whenever possible. Find ways to spend time in silence. If there is low-level noise in the background, select some peaceful music to counter it.

14.8 Temperature

> I pray thee, good Mercutio, let's retire; The day is hot, the Capulets abroad, And, if we meet, we shall not 'scape a brawl, For now, these hot days, is the mad blood stirring.
>
> —*Romeo and Juliet, Act 3, Scene 1*

In the final minutes of a National Hockey League game, a player nails his opponent with an unprovoked, injury-causing blow. The newspaper describes the event as happening "in the *heat* of the moment." Think about how temperature affects you. Heat-induced discomfort can make people irritable, stressed, and less tolerant, resulting in angry feelings. An accidental bump in a hot, crowded bar has led to the trading of insults, punches, and bullets. What impact does temperature have on our level of stress and on environmental factors such as violence and aggression?

Conclusive evidence associates high temperatures and aggression. The **heat hypothesis** states that hot temperatures can increase aggressive motives and behaviors. The **heat effect** is the observed result of higher rates of aggression by people who are hot compared to people who are cooler.[23]

Studies using various methods consistently support the heat hypothesis. Hot temperatures can increase aggression by directly increasing feelings of hostility and indirectly increasing aggressive thoughts. Better climate control in many settings, including prisons, schools, and the workplace, may reduce stress and tension, and the resulting aggression-related problems.[23]

Results from the following studies support the link between temperature and behavior:

- Baseball pitchers are more likely to hit batters with a pitch on hot days than on cooler days.[24]
- Rates of violent crime increase during the hottest times of the year.[25]
- A classic study in Phoenix, Arizona, found that aggressive horn-honking increases at hotter temperatures—but only for drivers without air-conditioned cars.[26]
- In a field experiment in which Dutch police officers performed a simulated burglary scenario under hot or comfortable conditions, the officers operating in warmer conditions reported more threatening impressions of the suspect, and were more likely to draw their weapons and shoot the suspect (with laser training weapons), relative to officers in cooler conditions.[27]

Tip: Are you a "hotter the better"-type person, or does the heat make you irritable and short-tempered? Each of us is genetically programmed to handle heat differently, so you will have to assess the temperature conditions that optimize your productivity and comfort levels. Whenever possible, deliberately alter your environment to create these ideal conditions.

FYI

Hot-Headed

There are approximately 2.6% more murders and assaults in the United States during the summer than other seasons of the year. Hot summers produce a more significant increase in violence than cooler summers. Violence rates are higher in warmer years than in cooler years.

Source: *"Temperature and Aggression," by C. Anderson, K. Anderson, N. Dorr, K. DeNeve, & M. Flanagan, in* Advances in Experimental Social Psychology, *edited by M. Zanna, 32 (2000): 63–133.*

14.9 Taking Control of Your Surroundings

Consider the ways sensory input, such as sights, sounds, smells, and temperature, contribute to your daily quality of life. Now, find other aspects of your environment that either add to or take away from the balanced, healthy life you want. Let's focus on these 3:

- The healing power of nature
- Clutter control—organizing and simplifying your surroundings and your life
- The impact of ever-increasing exposure to technology

Nature

Any discussion on environmental stress would be incomplete without including the effects of nature. Throughout most of human history, we lived very intimately with the natural

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

world. Our ancestors didn't spend most of their days in tightly enclosed buildings separated from their natural surroundings. Nearly every generation stayed close to or in the middle of nature. Jaynelle Stichler said, "Human beings are intimately connected to planet Earth. They share the planet with every other living organism, and they are just one strand in the complex web of life. When they live a disconnected existence, they become unhealthy, unbalanced, and unhappy. However, when they are in a healing environment, they know it. They feel welcome, balanced, relaxed, reassured, and stimulated."[28]

Many of us have experienced the stress-relieving benefits of a relaxing walk on the beach or a hike through the country, but what about when we spend our days indoors? Do you go from your home to your car, to school or work, to the grocery store or mall, and back home again with barely a moment's exposure to fresh air and nature? What can you do to incorporate the healing qualities of nature into your surroundings? Here are some suggestions for bringing nature into your daily life:

Chris Ryan/OJO Images/Getty Images

In the heat of the moment. The heat hypothesis states that hot temperatures can increase aggressive motives and behaviors.

- *Indoor and outdoor garden*: Research shows that plants—even just viewing them—lower people's stress levels, decrease blood pressure, reduce muscle tension, and contribute significantly to healing.[29] If you can't have an outdoor garden, create an indoor garden with an arrangement of plants.
- *Bring nature indoors:* Even in the largest city, you can create an indoor environment that puts you in touch with nature. Rocks, leaves, flowers, seashells, pinecones, wood—use whatever appeals to you to create a natural oasis in your home.
- *View of nature*: If possible, arrange your home or office to accommodate a relaxing view. Employees with a window view of nature report less stress, better health status, and better quality of sleep.[30]
- *Artwork:* If you don't have access to a window on nature, consider artwork depicting relaxing nature scenes.
- *Light and fresh air:* As discussed earlier, natural light and fresh air help relieve stress and create a feeling of being in nature, even indoors.

> The best remedy for those who are afraid, lonely, or unhappy is to go outside, somewhere where they can be quiet, alone with the heavens, nature, and God. Because only then does one feel that all is as it should be and that God wishes to see people happy, amidst the simple beauty of nature.
>
> *—Anne Frank*

Tip: Put an aquarium in the room where you feel the most stress. Many hospitals and medical offices install aquariums to reduce stress and create a calming atmosphere for their patients. You can create the same peaceful environment at home. Place an aquarium where you study or work—unless, of course, an aquarium would be a distraction for you.

As you read the Culture Connection: Healing Places feature, reflect on how the description of the ancient Greek healing place compares to today's hospitals—our modern-day places of healing. Which is more conducive to providing a calming, stress-relieving, healing environment?

TIME TIP

"The thing that helps me the most with time management is to be organized. So much time is wasted every day for people trying to find things. If you stay organized, no time is lost trying to find anything because you'll already know where it is!!! Everything in my house is separated into separate bins. I LOVE Rubbermaid containers!!! Seriously though, organization will not only help you manage your time, but it will also lower your stress!!! ORGANIZATION IS AWESOME!!!!!!!!"

—Bridgett E.

Organizing and Simplifying

Clutter can be stressful. Creating a clean environment can reduce stress. One of the simplest, most effective things you can do to promote a relaxing environment is clear away the clutter surrounding you at home, school, and work. In our search for happiness, we frequently think we'll find it with stuff. We know deep down that life is about more than having the latest fashions, the best toys, the newest car, or the biggest house, yet we still fill our lives with more stuff. Consider these ideas to help you reduce the useless clutter from your life:

- Remove clutter in your work or study environment. Look around the room and decide which things are essential to you and which items you can toss or recycle. Be honest with yourself. Ask yourself if you will read that magazine on the coffee table, or if you will finish the craft project you started 3 months ago. Similarly, assess your furniture. Decide what you need, and get rid of unnecessary items that make your room feel crowded.

> Nature does not hurry, yet everything is accomplished.
>
> *—Lao tsu*

Nomad/E+/Getty Images

Create a relaxing oasis in your home.

- Do you ever waste time looking for your keys, purse, billfold, glasses, or books? Look at the areas in which you work, study, and live, and then organize these areas so you don't waste time trying to find things. Put things away so you can easily find them, rather than spending stressful moments searching. With a little organization, you can reduce the clutter that can be distracting when you are trying to concentrate.
- Plan an "organization day" at least once a month. Use that day to sort through the stack of unread mail, clean off your desk, toss the month-old food from the fridge, throw away old newspapers, clean your car, organize your closets, and anything else to help you feel more in control of your environment.

> Any intelligent fool can make things bigger, more complex, and more violent. It takes a touch of genius—and a lot of courage—to move in the opposite direction.
>
> —*Albert Einstein*

Feng Shui Are there other things to consider as we pursue less stressful surroundings? Organizing our environment involves more than just clearing the clutter. ***Feng shui*** (pronounced "phung schway") is the ancient Chinese study of the natural environment. It is based on the belief that physical and emotional well-being are influenced strongly by our immediate environment. It is used to determine the most desirable location for people and things in a given situation. *Feng shui* is used to promote an optimally productive and harmonious environment that supports the people in that environment.[31]

Practitioners of *feng shui* use a unique compass, called a ***lo-pan,*** to determine the energy characteristics of a building or room. The layout of spaces and arrangement of furniture is said to affect the energy flow. The idea is to balance the energy so it will have a positive effect. Good **chi,** or energy flow, is believed to have a substantial impact on the health and peace of mind of occupants.

Details such as where to hang a mirror, how a door should open, and where to put a red or green plant or flower are believed to be capable of redirecting energy and enhancing the flow of energy within a house.[31] Here are some general *feng shui* guidelines.

- Provide direct views to entrances so as not to have people's backs to doorways.
- Avoid arranging furniture so that people sit in the direct line of the doorway. This puts the person directly in the rush of *chi*, with resulting adverse effects on health and productivity.
- Use warm lighting, as opposed to bright fluorescent lighting. Overly bright light is believed to irritate people and result in headaches.

Although many people have no awareness of the idea of energy flow, the principles of *feng shui* are gaining in popularity across the United States. *Feng shui* consultants guide architects in positioning and arranging buildings such as hospitals and office buildings, as

LOOK-foto/Superstock

A *feng shui* consultant uses a unique compass, called a *lo-pan*, to determine the energy characteristics at a construction site.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

CULTURE CONNECTION Healing Places

The ancient Greeks worshipped the god of healing by building healing temples within cypress groves near the ocean. They faced the sea and took advantage of its breezes and the sun. Patients at the temples used libraries, gardens, baths, theaters, gymnasiums, and specialized sleeping quarters to heal. They took part in activities designed to restore their natural body rhythms, and thereby achieve harmony between body and mind. The ancient Egyptians decorated their healing places with murals because they believed the decorations helped patients maintain their interest in life.

Source: *Integrative Health: A Holistic Approach for Health Professionals,* by C. Young & C. Koopsen (Boston: Jones and Bartlett Publishers, 2009).

Ghislain & Marie David de Lossy/Cultura/Jupiter Images

Healing places bring harmony to the body, mind, and spirit.

well as rooms within the buildings. Interior designers apply *feng shui* principles in arranging furniture, using plants and other living things, placing mirrors and pictures, and choosing colors. Even though the underlying principle of *feng shui*—living in harmony with nature—is sound ecologically, it may be difficult to empirically determine its effectiveness.

Tip: Make your home a place of sanctuary. Leave school and work activities at school or work. When you come home, listen to music, exercise, or sit peacefully to make a positive transition. Take off your watch; select a specific place in your home that is a sanctuary from stress. In this place, practice relaxation exercises, read pleasant books, plan, and organize. Don't pay bills, watch television, or deal with conflicts in this space. Devote time and space for hobbies. This will give you a sense of control and a release from the frenzied pressures of work and school. Decorate an area in your home for items such as plaques, trophies, certificates, and awards that recognize your accomplishments. You will feel a sense of pride in accomplishment; it will remind you of your strengths and capabilities, and motivate you to continue doing your best toward achieving your goals.

14.10 Ergonomics

Organizing and simplifying also applies to work and school settings. Employers are increasingly aware of the impact of the physical environment on their employees. An entire area of study has evolved to explore aspects of the environment that affect employee well-being and productivity. **Ergonomics** is the study of individual workers and the tasks they perform to design proper living and working environments. Many companies hire a specialist trained to assess the ergonomics of work areas.

The primary goals of ergonomics are (1) to make work safer and (2) to enhance worker and worksite well-being. Much research on ergonomics can be applied to the home environment as well. Here are some tips:

- Design your computer workstation and arrange your office furniture so you don't struggle with tension and pain from bad posture, eyestrain, back pain, or other symptoms of poor ergonomics. Your computer monitor and keyboard should be in a place where neither leads to discomfort from continued use. If you notice strain or muscle tension, adjust.
- Reduce eyestrain from spending hours working at your computer by looking away from the screen regularly. The small muscles of the eyes become tight and must be stretched, just like other muscles in the body. You can do this by taking a few seconds from time to time to look at objects at varying distances.

Johner Images/Getty Images

What can you do to add the healing qualities of nature into your daily life?

14.11 Technology and the Environment

In Greek mythology, Sisyphus was an evil king who was condemned to Hades. His eternal punishment was to roll a big rock to the top of a mountain, only to have it always roll down again in a perpetual cycle. A similar version of this punishment is experienced every day by people who find their e-mail boxes at work endlessly full.

Why discuss technology in a chapter on how your surroundings affect your stress? For some of you, the answer is obvious. More than ever before, we are surrounded by machines, gadgets, and a fantastic array of technology. Some of this technology and social media is helpful. How would you stay in touch with friends without Instagram or Facebook? How would you ever manage without your computer or smartphone? Some of these technological aids have contributed enormously to the productivity and efficiency of workers, and have opened communication between people throughout the country and abroad. These technologies, however, also have introduced new sources and symptoms of stress that would have been impossible to imagine just a few years ago.

Technostress

If your map app on your phone stops working; if you have felt helpless when your computer goes down; if your smartphone malfunctions, leaving you with no idea about when you are

STRESS BUSTING BEHAVIOR

A Peaceful Environment

Does your current living space meet the criteria for a soothing, rather than stressful, environment?

○ Soothing colors that create the mood you want
○ Bright, natural light, or a full-spectrum lamp
○ Calming smells
○ Windows open to let in fresh air
○ Plants, a view of nature, or artwork depicting a natural scene
○ Comfortable temperature
○ Furniture arranged in positions in keeping with *feng shui*
○ Space and possessions are organized
○ Clutter is cleared
○ Desk or other work areas are ergonomically correct and inviting areas to work
○ You feel in control of your use of technology to reduce your stress
○ Your technology and electronics do not overwhelm the space—or you

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

supposed to be somewhere; if you suffer from FOMO (fear of missing out) if you don't check your social media apps, you may be a victim of **technostress.** These feelings of dependence, incompetence, anxiety, and frustration related to modern technology describe this new term. Technostress can potentially affect every aspect of our lives, whether we're at work, at home, or at play. We have incorporated technology into almost every aspect of our waking lives, even while we sleep. We count on our machines to do so much that when something goes wrong with our technology, we feel almost lost. Our growing dependence on technology has the potential to affect us in stressful ways.

Mehmet Dilsiz/Shutterstock.com

We live in an environment where technology surrounds us. Computers and other technology have introduced new sources and symptoms of stress that we could not have imagined a few years ago.

Technology and Stress

Several issues relate to how technology may contribute to a stressful environment. You might be surprised at the findings of the innovative research on how the overuse of technology can have a profound effect on body, mind, and relationships. Consider how the following technology topics relate to you and your stress.

Continuous Partial Attention We all know the dangers of texting or talking on the phone while driving. But what does it do for our stress levels? Former Microsoft executive Linda Stone coined the term *continuous partial attention* to describe what happens when we focus too much on things like social media, television, and the Internet.

> To pay continuous partial attention is to pay partial attention—CONTINUOUSLY. It is motivated by a desire to be a LIVE node on the network. Another way of saying this is that we want to connect and be connected. We want to effectively scan for opportunity and optimize for the best opportunities, activities, and contacts, in any given moment. To be busy, to be connected, is to be alive, to be recognized, and to matter.
>
> We pay continuous partial attention in an effort NOT TO MISS ANYTHING. It is an always-on, anywhere, anytime, anyplace behavior that involves an artificial sense of constant crisis. We are always in high alert when we pay continuous partial attention. This artificial sense of constant crisis is more typical of continuous partial attention than it is of multi-tasking.
>
> Like so many things, in small doses, continuous partial attention can be a very functional behavior. However, in large doses, it contributes to a stressful lifestyle, to operating in crisis management mode, and to a compromised ability to reflect, to make decisions, and to think creatively. In a 24/7, always-on world, continuous partial attention used as our dominant attention mode contributes to a feeling of overwhelm, over-stimulation and to a sense of being unfulfilled.[32]

Multitasking Madness As of May 2019, the average amount of time spent with media by U.S. adults (ages 18+) averages 12 hours, 9 minutes per day.[33] That's a lot of screen time and a lot of bouncing from screen to screen! Does this never-ending use affect our well-being and how well we perform? You might think this practice with distractions would make one more adept at multitasking.

Neuroscientists tell us that our brains are designed to focus on one thing at a time. But if we try to multitask, it can negatively affect our well-being and increase our stress levels. In a study[34] from the University of Sussex, researchers wanted to see if there is a relationship between the amount of time people spend on media devices and brain structure. Using MRI, they found that participants who spent more time on the devices, more time multitasking, had less brain density in the anterior cingulate cortex. This is the area of the brain responsible for empathy and emotional control. The researchers concluded that multitasking, primarily via media devices, could be causing permanent alteration to brain structure with frequent use.

FYI

Drop Facebook, Be Happy

The Happiness Research Institute conducted a study to see what effect fasting from Facebook might have on how participants felt and performed. A sample of 1,100 regular Facebook users participated in this study. Ninety-four percent of the participants said they use Facebook at least once per day, and 78% said they use it for at least 30 minutes a day.

The participants were randomly assigned to 2 groups. For 1 week, the experimental group did not log onto Facebook at all. Members of the control group used the site as they usually would. At the end of the week, the participants were asked a series of questions about stress levels, emotional states, and mental performance.

Members of the control group were 55% more likely to be stressed and to feel lonelier, sadder, more depressed, angrier, and more worried compared to the non-Facebook group. Those who spent no time on Facebook reported feeling happier, more enthusiastic, and decisive than the control group. They also felt more satisfied with their social lives and more able to be more mindful. The researchers concluded that people who use Facebook regularly are 39% more likely to feel less happy than their friends.

Source: *"The Facebook Experiment: Quitting Facebook Leads to Higher Levels of Well-Being," by M. Tromholt,* Cyberpsychology, Behavior, and Social Networking, 19*(11) (2016).*

Information Overload and Continuous Change With access to so much information, we may feel overwhelmed, like we can't seem to successfully complete a task. There is always more information "out there." Combine this with higher expectations as phones, computers, and apps create demands for more efficiency and expectations of higher productivity. The pressure to produce more work faster becomes a stressful condition. Most people have grown up with this technology, yet some feel overwhelmed, frustrated, and irritated at the never-ending flood of new technology. During the past decade, technology has become part of our homes, our cars, our stores, our jobs, and every place in our lives. Some of these innovations demand new skills, speedier reaction times, and creativity on call 24 hours a day. Technology keeps coming at us; if we don't adapt, we fall behind.

Lack of Alone Time What are the developmental effects of 24/7 connectivity, especially on young people? If there is no downtime—no alone time to develop a sense of self—what are the consequences? Blurring the boundaries from the intrusion of computers and technology at school, work, and home affects everyone. Telecommuting and home-based businesses blur the boundaries between work and downtime. Cell phones, social media, and e-mail can leave you feeling like you are on call all the time.

Alienation and Isolation How could we be isolated from each other with so many ways to communicate, yet so little communication? Today's faceless forms of communication go against the basic human need to connect in person. Obsession with emerging technology may lead to a loss of our ability to feel and relate to others. While social networking sites can make us feel connected and like we have many friends, carefully assess the actual value of those "friends."

Physical Consequences Overuse of technology can affect more than just our mental health. Physical consequences can include everything from carpal tunnel syndrome due to repetitive wrist movements to sleep deprivation to eye problems.

- Sleep deprivation: During sleep, our brains organize connections among neurons, preserving and speeding up those that matter and dismissing those that don't. "Unfortunately, the new modes of communication and hours spent using them prevent already sleep-deprived teens from getting enough, which affects memory consolidation and behavioral regulation," says B. J. Casey, director of Cornell's Institute for Developmental Psychobiology. Even if young people get enough sleep but sustain multiple interruptions from, say, a buzzing smartphone next to the pillow, they may suffer cognitively and feel tired the next day.[35]
- Stress, sleep, and depression: Your cell phone use can have an impact on both your physical and your emotional health.[36,37] In one study, researchers looked to see if there are associations between psychosocial aspects of mobile phone use and psychological health symptoms among young adults between 20 and 24 years of age. The findings reveal that as mobile phone use increases, so do stress, sleep disturbances, and symptoms of depression for both men and women.[38]
- Computer vision syndrome (CVS): Optometrist Harvey Moscot advises that if you spend more than 2 hours staring at a screen—such as an e-book, a smartphone, or a laptop—you could suffer from CVS, a repetitive stress condition characterized by uncomfortable side effects, including headaches, blurred vision, and eyestrain. He recommends the 20-20-20 rule: After 20 minutes of reading, focus on an object 20 feet away for 20 seconds.[39]

Managing Technology Stress

How do you manage technology to make your life more balanced and less stress-inducing? Here are some tips:

- Take a pro-humanity, rather than an anti-technology, approach. Technology is here to stay, so rather than taking a negative view of it, move forward with an uplifting, inspiring look at ways to master the Information Age. The objective is to help us perform better at work, spend more quality time with our friends and families, and experience the wonder of technology without the technostress.
- Recognize that there is more technology than you will ever want or be able to use. With technology, like magazine subscriptions, you get to select what you want and use just what works for you. It's okay to leave the rest alone.
- Just because technology can do multiple jobs at the same time does not mean that we can. "Multitasking madness" hits us all as we try to juggle more tasks. It interferes with our sleep at night and our concentration and memory by day. Be deliberate and selective about your use of technology. Remember, you don't have to respond to that text message or buzzing smartphone.
- More than ever before, the home environment is changing. Family members are in their own "techno-cocoons," each hooked up to a different device. Create family rules for technological use to avoid this isolating trend.

Although technology can, and often does, work for us, the hopes and promises that technology would make life easier and allow more time for relaxation and rejuvenation haven't happened. What we find instead is that we get trapped and end up working for the technology. Carefully evaluate how and when you use technology. We can live well with technology and without technostress. Create an environment where you control the technology, rather than allowing it to control you.

FYI

Face Reality

People on Facebook

- On average, 1.5 billion people log onto Facebook daily.* Instagram has more than 500 million daily active users. **
- The average time spent per Facebook visit is 20 minutes.
- Every 60 seconds on Facebook: 510,000 comments are posted, 293,000 statuses are updated, and 136,000 photos are uploaded.

Source: *"The Top 20 Valuable Facebook Statistics – Updated June 2019," Retrieved June 25, 2019, from https://zephoria.com/top-15-valuable-facebook-statistics/.
**"The Ultimate List of Instagram Stats [2019]," by L. Kolowich, retrieved November 19, 2019, from https://blog.hubspot.com/marketing/instagram-stats.

14.12 Conclusion

A healing environment starts with you. Many aspects of your surroundings can contribute to a relaxing, stress-reducing environment. Think about how you can use the elements of color, noise, scents, light, temperature, and nature to create healing spaces and places in your environment. Think about how you can organize, simplify, and manage technology. Create an environment that contributes to your sense of peace and control in a seemingly chaotic world.

The impact of our environment on our health and well-being is profound. Sometimes we need to step back and assess our environment and how it affects us. We live in a world where so much seems out of our control.

Some of what happens is out of our control, but not everything. We should not underestimate the difference one person can make in creating a healing environment. Creating healing environments in our homes, our communities, our nation, and around the entire planet are necessary if we want to experience deep and enduring well-being. This Chinese proverb sums it up best:

> *If there is light in the soul, there will be beauty in the person.*
>
> *If there is beauty in the person, there will be harmony in the house.*
>
> *If there is harmony in the house, there will be order in the nation.*
>
> *If there is order in the nation, there will be peace in the world.*

ACTIVITY

14.1 How Healing Is Your Environment?

Purpose The purpose of this activity is to increase your awareness of your environment.

Directions Do this activity in a place where you spend considerable time, such as your dorm room or your home. Evaluate your environment by responding to the following:

1. Name the location you are assessing.
2. Describe the environment in as much detail as possible, including color, light, odors, air, noise, and temperature. Also, include aspects such as clutter control, organization, and incorporated natural elements.
3. What aspects of the environment are relaxing to you? Why?
4. What aspects of the environment are stressful to you? Why?
5. Assess how technology affects your environment. Do you manage your use of technology so it enhances your well-being, or does it contribute to your stress?
6. What are three things you could do to make your environment more relaxing and healing?

Key Points

- An environmental stressor is an aspect of our environment that we perceive as annoying, distracting, uncomfortable, or stressful.
- Environments are more than locations. They hold memories, experiences, energy, and meaning.
- Our perceptions determine whether an environmental factor is stressful.
- A healing environment is one that supports and nurtures individuals, one in which they feel calm, and one that promotes health and well-being.
- Specific colors can raise or lower your stress and energy level.
- Regular exposure to sunlight and full-spectrum lighting has been shown to improve seasonal affective disorder by increasing the amount of melatonin produced in the brain.
- Smell is analyzed in the limbic part of the brain, an area associated with emotions.
- Aromatherapy, the therapeutic use of essential oils, can lower stress levels.
- Noise is among the most pervasive and destructive environmental pollutants.
- Perceived noisiness describes the subjective assessment of noise that combines the decibel level and the context in which noise occurs. Perceived noisiness may be a better predictor of adverse reaction to sound than is loudness.
- According to the heat hypothesis, hot temperatures can increase aggressive motives and behaviors. The heat effect is the observation of higher rates of aggression in people when the temperature is hot compared to when it is cooler.
- *Feng shui*, the ancient Chinese study of the natural environment, is based on the belief that our immediate environment strongly influences physical and emotional well-being.
- Ergonomics is the study of individual workers and the tasks they perform to design proper living and working environments.
- Technostress describes feelings of dependence, incompetence, anxiety, and frustration related to technology.
- Managing technology is essential for physical, mental, emotional, and social well-being.

Key Terms

environment
external environment
environmental stressor
learned response theory
healing environment
chromotherapy
seasonal affective disorder (SAD)
melatonin
pineal gland
aromatherapy
decibels
perceived noisiness
white noise
heat hypothesis
heat effect
feng shui
lo-pan
chi
ergonomics
technostress

References

1. *The Meaning of Everyday Occupation,* by B. Hasselkus (Thorofare, NJ: Slack Incorporated, 2002).
2. *Integrative Health: A Holistic Approach for Health Professionals,* by C. Koopsen & C. Young (Boston: Jones and Bartlett Publishers, 2009).
3. "Optimal Healing Environments" by B. R. Sakallaris, L. MacAllister, L. Voss, M. Smith, & K. Jonas, *Global Advances in Health and Medicine, 4*(3) (2015): 40–45.
4. "The Effects of Color on the Moods of College Students," by S. Kurt & K. K. Osueke, *SAGE Open* (February 2014).
5. "Chromo Therapy – An Effective Treatment Option or Just a Myth? Critical Analysis on the Effectiveness of Chromo Therapy," by S. Gul, *American Research Journal of Pharmacy, 70*(1) (2015).
6. "Lack of Exposure to Natural Light in the Workspace is Associated with Physiological, Sleep and Depressive Symptoms," by F. Harb, M. P. Hidalgo, & B. Martau, *Chronobiology International, 32*(3) (2015): 368–375.
7. "Why We Need More Nature at Work: Effects of Natural Elements and Sunlight on Employee Mental Health and Work Attitudes," by M. An, S. M. Corelli, K. O'Brien, & M. E. Boyajian, *PLoS ONE 11*(5), (2016): e0155614. doi:10.1371/journal.pone.0155614.
8. "Bright Light Therapy in Seasonal Bipolar Depressions," by P. A. Geoffroy, T. Fovet, J. A. Micoulaud-Franchi, et al., *Encephale, 41*(6) (2015): 527–533.
9. "Seasonal Affective Disorder: An Overview of Assessment and Treatment Approaches," by S. Melrose, *Depression Research and Treatment* (2015): 178564.
10. "Beneficial Effects of UV Radiation Other Than Via Vitamin D Production," by A. Juzeniene & J. Moan, *Dermato-endocrinology, 4*(2) (2012): 109–117.
11. "Effects of Aromatherapy on the Anxiety, Vital Signs, and Sleep Quality of Percutaneous Coronary Intervention Patients in Intensive Care Units," by M. Y. Cho, E. S. Min, M. H. Hur, & M. S. Lee, *Evidence-based Complementary and Alternative Medicine* (2013): 381381.
12. *Mosby's Complementary and Alternative Medicine: A Research-Based Approach* (3rd ed.), by L. Freeman (St. Louis: Mosby, 2009).
13. "The Effect of Aromatherapy on Pain, Comfort and Satisfaction During Childbirth," by Z. Cenkci & E. Nazik, *New Trends and Issues Proceedings on Humanities and Social Sciences. 4*(2) (2017): 11–19.
14. "Influence of Frangrances on Human Psychophysiological Activity: With Special Reference to Human Electronencephalographic Response," by K. Sowndhararagan & S. Kim, *Scientia pharmaceutica, 84*(4) (2016): 724–752.
15. "Windows and Classrooms," by L. Heschong, *Journal of Alternative and Complementary Medicine, 10*(1) (2004): S71–83.
16. "About Noise, Noise Pollution, and the Clearinghouse," Noise Pollution Clearinghouse. Retrieved May 1, 2011, from http://www.nonoise.org/aboutno.htm.
17. *Office Work Can Be Dangerous to Your Health*, by J. Stellman & M. Henifen (New York: Pantheon, 1983).
18. *Community Noise,* by B. Berglund & T. Lindvall (Geneva: World Health Organization, 1995).
19. *Stress Less: Four Weeks to More Abundant Living*, by M. Hesson (Nashville: Abingdon Press, 1999).
20. "Concepts of Perceived Noisiness, Their Implementation and Application," by K. D. Kryter. *The Journal of the Acoustical Society of America, 43*(2) (2005): 344–361.
21. "Reproductive Health and the Workplace: Noise," *The National Institute for Occupational Safety and Health (NIOSH)*, retrieved on December 4, 2019, from https://www.cdc.gov/niosh/topics/repro/noise.html.
22. "Preliminary Evidence: The Stress-Reducing Effect of Listening to Water Sounds Depends on Somatic Complaints," by M. V. Thoma, R. Mewes, & U. M. Nater, *Medicine, 97*(8) (2018): e9851.
23. "Heat and Violence," by C. Anderson, *Current Directions in Psychological Science, 10*(1) (2001): 33–38.
24. "How Will Rising Temperatures Change Baseball?" by J. Florio & O. Shapiro, *The Atlantic,* (October 4, 2015), retrieved on December 4, 2019, from https://www.theatlantic.com/science/archive/2016/10/how-will-rising-temperatures-change-to-baseball/502778/.
25. "Heatwave: Is There More Crime in Hot Weather?" *BBC News,* (July 19, 2018), retrieved on December 4, 2019, from https://www.bbc.com/.

26. "Ambient Temperature and Horn-Honking: A Field Study of the Heat/Aggression Relationship," by D. Kenrick & S. MacFarlane, *Environment and Behavior, 18* (1984): 179–191.
27. "Aggression of Police Officers as a Function of Temperature: An Experiment with the Fire Arms Training System," by A. Vrij, J. van der Steen, & L. Koppelaar, *Journal of Community and Applied Social Psychology, 4* (1994): 365–370.
28. "Creating Healing Environments in Critical Care Units," *Critical Care Nursing Quarterly, 24*(3) (2001): 1–20.
29. "Interaction with Indoor Plants May Reduce Psychological and Physiological Stress by Suppressing Autonomic Nervous System Activity in Young Adults: A Randomized Crossover Study," by M. S. Lee, J. Lee, B. J. Park, & Y. Miyazaki, *Journal of Physiological Anthropology, 34*(1) (2015): 21.
30. "Impact of Windows and Daylight Exposure on Overall Health and Sleep Quality of Office Workers: A Case-Control Pilot Study," by M. Boubekri, I. N. Cheung, K. J. Ried, C. H. Wang, & P. C. Zee, *Journal of Clinical Sleep Medicine: JCSM: Official Publication of the American Academy of Sleep Medicine, 10*(6) (2014): 603–611.
31. *Traditional Feng Shui*, retrieved on December 4, 2019, from http://www.traditionalfengshui.com/.
32. "Continuous Partial Attention," by L. Stone, (2017), December 7, 2019, https://lindastone.net/.
33. "US Time Spent with Media 2019," by M. Dolliver, (May 30, 2019), December 7, 2019, https://www.emarketer.com/content/us-time-spent-with-media-2019.
34. "Higher Media Multi-Tasking Activity Is Associated with Smaller Gray-Matter Density in the Anterior Cingulate Cortex," by K. K. Loh, & R. Kanai, *PloS one*, *9*(9) (2014), e106698. doi:10.1371/journal.pone.0106698.
35. "Technology: Wired for Distraction?" by D. Conle, *Time, 177*(7) (2011): 55–56.
36. "The Relationship Between Addiction to Smartphone Usage and Depression Among Adults: A Cross Sectional Study," by A. A. Alhassan, E. M. Alqadhib, N. W. Taha, R. A. Alahmari, M. Salam, & A. F. Almutairi, *BMC Psychiatry, 18*(1), (2018): 148.
37. "Cell Phone Addiction and Psychological Health in Adolescents," by S. Shoukat, *EXCLI Journal, 18,* (2019): 47–50.
38. "Mobile Phone Use and Stress, Sleep Disturbances, and Symptoms of Depression Among Young Adults: A Prospective Cohort Study," by S. Thomée, A. Härenstam, & M. Hagberg, *BMC Public Health, 11*(66) (2011): 1–11.
39. "E-Reader Eyestrain," *Real Simple*, March 2011: 48.

chapter

15

Healthy Lifestyles

Sean Nel/Shutterstock.com

When health is absent, wisdom cannot reveal itself, art cannot manifest, strength cannot fight, wealth becomes useless, and intelligence cannot be applied.

—*Herophilus*

What kind of exercise best helps to reduce stress?

Should I take vitamins when I am stressed?

Could stress have anything to do with the extra weight I have gained since I started college?

When I get stressed, I can't sleep, and when I can't sleep, I get more stressed. It feels like a vicious cycle. What can I do to ease my stress so I can sleep better?

Since I started college, I've been drinking more. I know drinking isn't good for me, but it seems to help me relax. If I give up drinking, what can I do instead to help me deal with the stress of college?

Learning Objectives

Study of this chapter will enable you to do the following:

15.1 Explain the health and stress-relieving benefits of a balanced exercise program.

15.2 Describe the components of a healthy diet.

15.3 Explain the impact of stress on nutritional needs and body fat.

15.4 Discuss the relationship between stress and eating disorders. Assess the amount of sleep you require.

15.5 Implement healthy sleep habits.

15.6 Explain unhealthy coping strategies, including the adverse effects of tobacco, alcohol, and drugs.

15.7 Incorporate healthy lifestyle habits into your life to reduce and eliminate stress.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

Real People, Real Stories

Esthela's Story I began this semester on Prozac (which I had been on for a while), and now (at the end of the semester), I am no longer taking it. I no longer need Prozac to calm me down. I feel like I finally have control of my emotional situation. I've checked in with my partner to see how he feels I am doing, not being on Prozac, and he says that I have been doing awesome. Typically, the holidays on top of school make me very anxious to the point that I would rather shack up and not leave my house. This holiday season has been delightful for me. What else am I doing differently? I dusted off my bike and started riding again with my friends. I'm eating cleaner and making sure my sleep routine is good. That's probably the thing that's made the most considerable difference. I'm sleeping 7 to 8 hours every night. Since I've been doing something relaxing before I fall asleep (usually a guided relaxation exercise), I haven't slept this well in 20 years. I can really tell the difference.

15.1 Healthy Lifestyles

No matter your age, you have the freedom to choose your habits. Now is an appropriate time to look at your behaviors and decide which ones contribute to positive well-being and low stress, and those that negatively affect your well-being. Exercise, nutrition, sleep, and avoiding unhealthy habits are essential elements of a healthy lifestyle.

Stress influences health through its direct physiological effects and also through its indirect effects through modified health behaviors.[1] Maintaining a healthy lifestyle includes avoiding activities that people sometimes believe will help them relax or cope, but which actually increase stress by contributing to a decline in health.

This chapter focuses on the physical dimension of health. Taking care of your body is an essential stress-prevention strategy. A strong, healthy body is more resilient, more able to adapt, and less likely to suffer the adverse effects of stress at the physical, mental, emotional, social, and spiritual levels.

15.2 Exercise

The benefits of a regular, balanced exercise program are well known. It is a critical component of a healthy lifestyle. Exercising may also be one of the most effective ways to manage stress. Research clearly shows that exercise boosts mood and enhances mental function. Physiologically, exercise stimulates the brain neurotransmitters dopamine and serotonin. Exercise reduces anxiety, muscle tension, and blood pressure—three measures of stress.

Oliveromg/Shutterstock.com

Exercise is a great stress reliever. It turns off the stress response and activates the relaxation response.

Exercise as a Stress Buffer

Exercise is one of the most potent stress buffers for many reasons. To understand why exercise is beneficial in reducing stress, recall the discussion about the stress response in Chapter 3. When we sense danger, the body automatically gears up for activity—fight or flight. The physical activity we do when we exercise follows through on that message by using our fighting and running muscles.

During exercise, the body uses excess blood sugar; muscles use the stress hormones adrenalin and cortisol; and circulating fats in the bloodstream are used for energy. The body goes through a process the same as the stress response—a period of arousal and hyperstimulation, followed by a period of exhaustion and rest.

Biologically, exercise gives the body a chance to practice handling stress. It forces the body's physiological systems—all of which participate in the stress response—to communicate much more closely than usual: The cardiovascular

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

STRESS STUDIES

Looking Good, Feeling Great

A review of research evaluating the relationship between exercise, physical activity, and physical and mental health supports the evidence that regular exercise has a beneficial influence on much more than just the physical dimension. Exercise helps us feel better emotionally, and it helps us function more effectively in our daily activities. Regular activity improves our general levels of health, well-being, and overall quality of life. This is true of every population that has been studied, including both genders, a variety of ethnic groups, and across the life span.* Exercise appears to be the magic pill that enhances every dimension of a person's life.

Health benefits from regular exercise that should be emphasized and reinforced by every mental health professional to their patients include the following:

1. Improved sleep
2. Increased interest in sex
3. Better endurance
4. Stress relief
5. Improvement in mood
6. Increased energy and stamina
7. Reduced tiredness that can increase mental alertness
8. Weight reduction
9. Reduced cholesterol and improved cardiovascular fitness

Source: *"Exercise for Mental Health," by A. Sharma, V. Madaan, & F. D. Petty,* Primary Care Companion to the Journal of Clinical Psychiatry, 8*(2) (2006): 106.*

system communicates with the renal system, which communicates with the muscular system. And all of these are controlled by the central and sympathetic nervous systems, which also must communicate with each other. This workout of the body's communication system may be the true value of exercise; the more sedentary we get, the less efficient are our bodies in responding to stress.[2]

Monkey Business Images/Shutterstock.com

Exercise contributes to the feeling that we can take control of our life and health.

Other Benefits of Exercise

Exercise can make you feel better by improving your mood, reducing your anxiety, and increasing your energy. Exercise generates a natural release of the mood-lifting hormones called endorphins. These "feel-good" hormones act the same way morphine works in the body, only without the adverse side effects. Exercise can also give you a sense of accomplishment and boost your confidence. Exercise increases blood flow to the brain, resulting in improved concentration and alertness and helping you think more clearly. Thoreau said, "The moment my feet begin to move, my thoughts begin to flow." Many people find that they do their best thinking while exercising.

Tip: Instead of cramming for the 15 minutes immediately before an exam, take a brisk walk around the block, or run up and down the stairs a few times. This will help you relax, increase blood flow to the brain, and help you think more clearly.

Physical conditioning offers additional protection. Individuals who condition their heart, lungs, and skeletal muscles by exercise can withstand cardiovascular and respiratory effects of the alarm stage of stress better than those who lead a sedentary life.[3] Regular exercise conditions us to become stronger and able to adapt to daily pressures more readily. Stress hinders optimum functioning of the immune system. Because exercise relieves stress, a physically fit person does not get sick as often as the person who has a weaker immune system. Because a physically healthy person has greater endurance, he or she is less likely to feel fatigued at the end of a long day.

One more benefit of exercise related to stress management involves the component of *control.* The more a person feels in control of a situation, the less stress he or she is likely to feel. When we work out, we participate in activities over which we usually have plenty of control.

FYI

For Better Health, Take a Walk

Compared to a control group who did nothing more than regular daily activities, an experimental group who chose to walk 10,000 steps per day fared significantly better on several health parameters. The walking group had improved post-exercise heart rate, better total cholesterol, improved flexibility, and better overall physical and psychological well-being. So, whether you do it alone or with a friend, walking is a beautiful way to take a long, appreciative look at the world around you while improving your health.

Source: *"Walking Toward a New Me: The Impact of Prescribed Walking 10,000 Steps/Day on Physical and Psychological Well-Being," by A. L. Morgan, D. A. Tobar, and L. Snyder.* Journal of Physical Activity and Health, 7*(3) (2010): 299–307.*

Components of Physical Fitness

For best results, exercise should be regular and balance the following elements of physical fitness:

1. **Cardiorespiratory fitness:** The ability of the heart, lungs, and blood vessels to process and transport oxygen required by muscle cells so they can meet the demands of prolonged physical activity. Cardiorespiratory fitness is produced by physical activity that requires continuous, repetitive movements, such as jogging, swimming, and biking.
2. **Muscle fitness:** Muscle strength and endurance. **Muscle strength** is the ability of the skeletal muscle to engage in work and relates to the force that a muscle can exert. **Muscle endurance** is the ability of muscles to function over time and is supported by the respiratory and circulatory systems. Weight lifting exercises can improve muscle fitness.
3. **Flexibility:** The ability of joints to move freely through a full range of motion. Stretching exercises support and improve flexibility. These exercises are particularly useful for relieving stress-induced muscle tension. Chapter 22 will introduce you to a variety of yoga poses that help you increase flexibility.

   Tip: Stretching exercises are effective in promoting relaxation. If you do a lot of sitting or repetitive activity, take frequent stretch breaks. This gets your blood flowing, relieves muscle tension, and helps you return to your work better able to focus on the task at hand.
4. **Body composition:** Makeup of the body in terms of fat tissue and lean body tissue (muscle, bone, and organs). Knowing your ratio of body fat to fat-free weight is especially important, considering the national increase in obesity and related health problems. The same types of activities that improve cardiovascular fitness and muscle strength also enhance body composition. You will learn later in the chapter that stress affects body fat, which makes these exercises especially crucial for individuals with higher stress levels.

Which Exercise Is Best?

Which is the best exercise to help you reduce stress? The easy answer is *whichever one you will do.* Cardiorespiratory activities such as jogging, bicycling, rowing, hiking, brisk walking, or playing in some higher-intensity sports such as racquetball and volleyball are especially useful for bringing about post-exercise relaxation. Workout routines, spinning classes, or CrossFit are ideal stress-reducing activities. Whatever type of exercise you choose, do it and enjoy all the benefits!

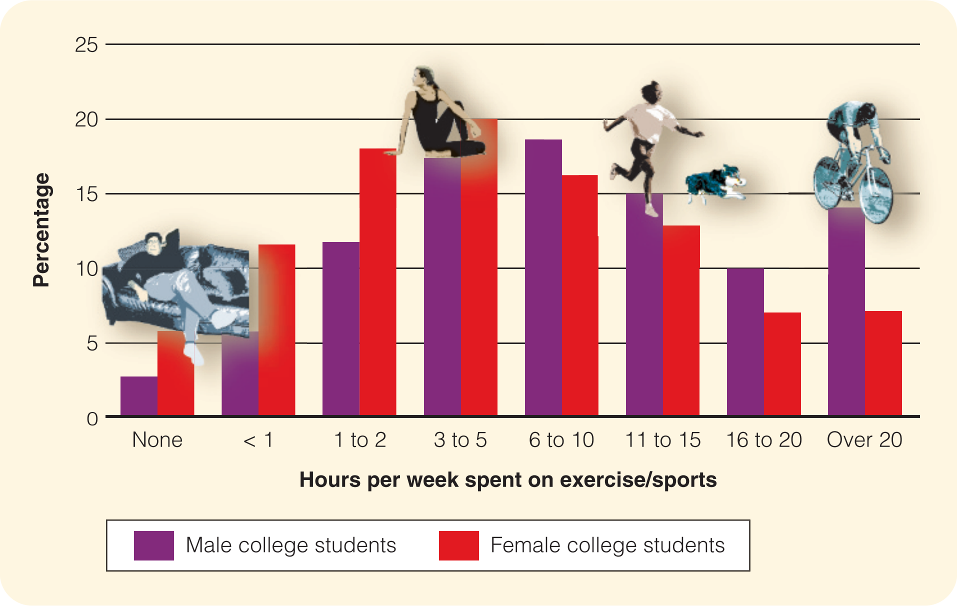


FIGURE 15.1
Snapshot—On Campus Now: Student Bodies in Motion

Source: An Invitation to Health 2009–2010 Edition, *by D. Hales (Belmont, CA: Wadsworth /Cengage Learning, 2009).*

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

TABLE 15.1 What Mood Are You In?[5]

Mood	Workouts That Work
Your mood is low, and you feel sad, listless, apathetic.	Move for at least 10 to 30 minutes at mild to moderate intensity. Focus on your body, not your brain, until you can feel yourself regain vitality. Take a mindful walk to expand your senses. Listen to music that invigorates you and lets you express your emotions; move or dance to it. Walk the dog. Swing your arms vigorously front and back. Make faces expressing different emotions. Practice smiling.
You are bored and tired, and you feel lazy and exhausted.	Rev up your heart rate. Engage in moderate aerobic activity for at least 10 to 30 minutes as an energy booster and pick-me-up. Take a brisk walk or jog (don't stroll). Skate, bicycle, use the elliptical machine, or perform any other cardio activity that you can comfortably sustain.
You are nervous and hyperactive and feel wound up and overstimulated.	Relax and slow down your breathing and heart rate. Engage for 10 to 60 minutes (or as long as it takes) in any repetitive activity that will calm you. Practice yoga or tai chi, or take a long stroll. Swim laps.
You are restless and complaining and feel irritable and short-tempered.	You have excess energy to burn, so work out hard. Engage in exercise that will focus your attention for at least 20 to 40 minutes. Lift weights, pound a punching bag, or jump rope. Run sprint/jog intervals by interspersing 30 to 60 seconds at high intensity with 2 to 3 minutes at moderate intensity. Play racquetball and hit the ball as hard as you can.

Source: "Attitude Adjustment," by L. Shelton, *Natural Health, 34*(3) (2004): 42–44.

Equally important is what you want to achieve from exercise. Do you want to relieve built-up tension or get energized? Do you want to slow down and relax, or do you want to work off some anger? Choose the activity you need at the time to transform your mood. Invigorating exercises like those explained in Table 15.1 are especially helpful because they aid in physical and mental relaxation.

But remember, too much of a good thing can be harmful to your health. Overexercising can become a stressor to the body and may lead to problems like overuse injury, muscle strain, and joint pain. It is even possible to become addicted to exercise to the point where enjoyment is replaced by physical decline, irritability, and depression. Approaching exercise as a highly competitive activity can also defeat its stress-relieving benefits. Physical activity should be enjoyable. If it becomes an addiction or a way of avoiding other things in your life, you probably aren't doing it for the right reasons, and you're not as likely to gain the benefits of regular exercise.

FYI

Time Spent Studying—Not So Good for Fitness

In a study looking at healthy college students and physical activity, several interesting findings emerged:

- As time spent studying increased, so did levels of body fat.
- As time spent on social media increased, so did levels of body fat.
- As time spent studying increased, physical endurance decreased.
- As course load increased, activity levels decreased.

In your busy schedule, be sure to include regular activity.

Source: *"College Students' Work Habits Are Related to Physical Activity and Fitness," by J. Calestine, M. Bopp, C. M. Bopp, & Z. Papalia,* International Journal of Exercise Science, *10(7) (2017): 1009–1017.*

Sticking with Exercise

The following three factors help people start and stick with an exercise routine:

1. *Enjoyment*. Select the activities you enjoy. Exercising just because someone says it is good for you may cause more stress than it relieves. Go for a jog, lift weights, dance, practice yoga, or do whatever you want to do to get moving.
2. *Convenience*. Cost and time barriers can prevent you from taking part in specific exercise programs that involve driving to a location and paying for a class. Drop the belief that you must go to the gym and spend an hour or more doing a regular workout. If all you have to do is put on your shoes and sweats

and walk out your door to begin exercising immediately, you are more likely to do it. Having weights or exercise videos at home can also make it easier to get started. Or think about killing two birds with one stone:

- Take your kids to the park, ride bikes together, or play tag in the backyard—you're getting physical activity while enjoying family time.
- Schedule meetings or social time on the track so you can talk things over while you jog or walk.
- Remember, even gardening, mowing the lawn, and housework can be beneficial. You can get your work done and enjoy the stress-relieving benefits of physical activity.

3. *Social support*. Although some people like to exercise alone, many find that combining exercise with social activity, such as intramural basketball or tennis, increases their enjoyment and helps them stick with it. Walking with a couple of friends who are counting on you to be there can increase your motivation and make your exercise time more enjoyable. People who have exercise partners stay with their programs and reach their goals more often than those who try to go it alone.

Develop a plan for incorporating activity into your life. Take a few minutes to think about what types of exercise would be most beneficial to you. To get started, schedule 90 minutes of exercise per week and work your way up to at least 150 minutes of activity each week.[4] Make it social, make it convenient, make it fun, and if possible, take it outside. Outdoor workouts do double duty because sunlight and fresh air energize the body and indirectly improve sleep, another essential for excellent mental health.

Consider a regular exercise routine as well as activities you can do on an "as-needed" basis. When you have been working at the computer for hours, do push-ups and stretch, rather than taking a junk food break. A balanced exercise program, along with a healthy diet, is fundamental to both a healthy lifestyle and a stress management program.

FYI

Do I Need a Vitamin?

Because some people seem unable to eat when they are stressed, and because the body requires extra amounts of some nutrients when stress levels are high, many nutritionists recommend taking a vitamin-mineral supplement for support during stressful times. Megadoses aren't necessary, merely amounts comparable to the **reference daily intakes (RDI),** which are the recommended amounts of nutrients to be consumed each day, should meet the needs of most healthy people. Supplements, of course, do not take the place of eating a balanced diet.

15.3 Nutrition

"I can't eat a bite when I'm stressed." "When I'm stressed, I eat like a horse." Stress can alter eating behaviors from one end of a continuum to the other, which creates some unique nutritional needs. We differ in how stress affects us nutritionally. Food is the fuel that feeds our body. When we overeat, don't eat enough, don't eat often enough, or select unhealthy foods, our body does not have the proper fuel it needs to run efficiently. The results are fatigue, low energy, and an overall decline in our health and our ability to deal with stress.

STRESS STUDIES

Cut Stress, Reduce Diabetes

According to Gary Tobin, MD, associate professor of medicine and director of the Washington University School of Medicine Diabetes Center, "The stress reaction can spike glucose levels and lead to poor eating choices . . . and there is some evidence that stress can lead to diabetes." When asked if stress can cause diabetes, "The answer is maybe. Can stress lead to changes in your blood sugar? The answer is absolutely." Tobin says patients who control their stress tend to do a better job of managing their diabetes.

Source: *"Seven Ways Stress Impacts Our Bodies," by D. T. Keaggy, retrieved March 12, 2014, from http://news.wustl.edu/news/Pages/26275.aspx.*

A Healthy Diet

Healthful eating is an essential component of optimum health and well-being. A well-nourished body also helps deal with the stressors of life. The best nutritional program for stress is a varied and balanced diet. Two tools to guide healthy eating are the *Dietary Guidelines for Americans* and *ChooseMyPlate*. The ***Dietary Guidelines for Americans*** provides science-based advice to promote health and reduce the risk of major chronic diseases through diet and physical activity. The Dietary Guidelines encourage Americans to focus on eating a healthful diet of foods and beverages that help achieve and maintain a healthy weight, promote health, and prevent disease. A complete description of the guidelines is at https://health.gov/dietaryguidelines/.

ChooseMyPlate features practical information and tips to help you build a healthier diet. A free downloadable app like eaTracker or MyFitness Pal can help you plan, analyze, and track your diet and physical activity. Check out MyPlate On Campus, an initiative to get college and university students talking about healthy eating and working with their campus community to adopt healthy lifestyles that they can maintain during and beyond their college years. ChooseMyPlate is at https://www.choosemyplate.gov/.

Thomas Del Brase/Stone/The Image Bank/Getty Images

Eating well means choosing a variety of fruits and vegetables.

Nutrition and Stress

Nutrition experts recommend a foundation of fresh fruits, fresh vegetables, whole grains, and legumes. Moderate amounts of protein and dairy foods should be in a healthy diet. The body gets energy from three sources: carbohydrates, fats, and proteins. During stress, we draw upon all three of these energy fuels in increased quantities. Therefore, we should keep a balance of nutrients from these sources. Although a varied and balanced diet supplies the foundation for healthy nutrition, stress places additional nutritional demands on the body.

Even though you need a balanced diet that includes foods from all the food groups, fruits, vegetables, legumes, and whole grains are especially important. Complex carbohydrates are an ideal anti-stress food because they boost the brain's level of the mood-enhancing chemical **serotonin.** Useful sources include broccoli, potatoes, corn, cabbage, spinach, whole-grain bread and pasta, and cereals. Leafy vegetables, whole grains, nuts, and seeds also are rich in other essential nutrients.[6]

Fresh Fruits and Vegetables Many of the vitamins and minerals we need are found in a variety of fruits and vegetables. They furnish thousands of plant chemicals, including antioxidants, immune-system boosters, and enzymes. A rule of thumb is to eat a variety of different colors of fruits and vegetables.

Legumes Legumes should be a regular part of our daily diet. These include all peas, beans, chickpeas, soybeans, peanuts, and lentils. Legumes are high in fiber and are loaded with essential nutrients.

Whole Grains White bread has been processed so entirely that nearly all its nutritional value is gone. All that is left is the equivalent of simple sugars. Enriched flour has some of the nutrients added back, but it is still deficient compared to 100% whole wheat. The same is true of white rice and other processed grains. Whole grains keep more of their original nutrients than highly processed grains. Whole grains also tend to have more fiber, which slows glucose absorption and is valuable in supporting good colon health.

Whole grains are essential to a healthy diet in part because of how they relate to blood sugar levels. The **glycemic index** is a measure of foods and how quickly they convert into blood sugar. Foods that enter the bloodstream quickly have a higher glycemic index. The result of high glycemic index foods such as simple sugars is that the blood sugar level increases rapidly. The body responds by secreting insulin, which reduces blood sugar levels by converting it to fat. This fluctuation can leave you feeling low on energy and less able to combat stress mentally and physically. Lower glycemic index foods, including whole grains, produce a more stable blood sugar level and, as a result, a more stable mood and energy level.

FYI

Hidden Sugars

Be on the lookout for hidden sugars. A can of soda has about 12 teaspoons of sugar; low-fat fruit yogurt has 7 teaspoons of sugar, and a tablespoon of ketchup has a teaspoon of sugar. Sodas, energy drinks, and sports drinks are to blame for 36% of added sugar in our diet.

iStock.com/Robert Churchill

Legumes are high in fiber and packed with essential nutrients.

Scorpp/Shutterstock.com

Whole grains are a necessary part of a healthy diet.

Drinking Water

Several variables—climate, activity level, and intake of caffeine or alcohol, among others—affect the amount of water you need. Common side effects of stress that increase the body's demands for water include dry mouth, increased respiration, and increased perspiration. Low water levels in the body can affect our moods and perceptions dramatically. A decrease in the body's water level of as little as 1 to 3% can make us feel agitated and irritable. A 3 to 5% drop can cause headaches, weakness, and fatigue. A reduction of more than 5% can result in hospitalization. We often do not recognize that the cause of our sluggishness and headaches may be mild dehydration. Nutritionists recommend drinking enough water so that your urine is light yellow or clear, not dark in color.

Tip: Carry a bottle of water with you throughout the day. At home, put a full pitcher of water in the refrigerator every morning, and be sure it is empty by bedtime. Squeeze a few drops of lemon juice into the water to give it a more pleasant taste and to neutralize chlorine.

What to Limit or Avoid in Your Diet

For optimum health and stress management, limit your intake of caffeine, fats, sugars, and soft drinks.

Caffeine Caffeine is the most widely used psychoactive (mind-affecting) drug in the world. Coffee, the caffeine source of choice, is enjoyed by 80% of Americans. Several scientists express concern about highly caffeinated beverages like Red Bull, Rockstar, Monster, and Full Throttle, which are popular among teenagers and young adults.[7] Caffeine is the main ingredient in these drinks, with doses sometimes high enough to cause physical and psychological complications, including disrupted sleep, exaggerated stress response, heart problems, and increased risk of high blood pressure.[8]

Caffeine is known to increase stress hormones, which may persist long after drinking a cup of coffee or a soft drink.[9] Caffeine is a stimulant that in excessive amounts can lead to restlessness or nervousness (the "jitters"), as well as a racing heartbeat, tremors, sleep disturbances, and nausea. You also may feel anxious or even depressed if you consume large amounts of caffeine. For most people, moderate caffeine intake does not cause serious health risks, and in some cases, there may be improvements to cognitive performance with limited use;[8] however, caffeine is addictive, and withdrawal symptoms can include headache, restlessness, and irritability when caffeine consumption is halted suddenly.

Trans Fatty Acids Foods that have hydrogenated or partially hydrogenated oil—trans fatty acids—should be avoided as much as possible. Consuming these and saturated fats increase plaque deposits in blood vessels, which can lead to blood vessel diseases including heart disease and stroke. Foods typically containing considerable amounts of hydrogenated fat include margarine, pastries, crackers, cookies, and some cereals.

Soft Drinks A typical soft drink has about 12 teaspoons of sugar. Many soft drinks have caffeine and, often, other substances that are of no nutritional value to the body. Soft drinks have a high glycemic index. The carbonation also tends to inhibit the absorption of essential minerals. Many people have replaced water with sugar–and caffeine-filled or artificially sweetened soft drinks as their beverage of choice. Soft drinks with artificial flavoring such as aspartame tend to increase the craving for sugar throughout the day, with unhealthy consequences.

Overeating

Digesting food requires a lot of energy. Recall how you felt after you ate a large meal. Most people say they feel tired and lethargic. Let's examine why this happens. Your stomach is about the size of two fists. Consider the amount of food that goes into a super-sized

STRESS STUDIES

Comfort Food

Increased stress during university examinations is associated with eating a poorer quality diet including less fruit and vegetables and more fast food, according to an observational study being presented at the European Congress on Obesity (ECO). "Stress has long been implicated in poor diet. People tend to report overeating and comfort eating foods high in fat, sugar, and calories in times of stress. Our findings looking at the eating habits of students during exam periods confirm this stress-induced dietary deterioration hypothesis," says Dr Nathalie Michels from Ghent University in Belgium who led the research.

"A healthy diet is needed for optimal academic and mental performance. Unfortunately, our findings suggest that students have difficulties eating healthily and find themselves adopting bad eating habits, which over a few weeks can considerably affect your overall health and be difficult to change."

Source: *"Study Links Exam Stress with Junk Food Cravings, Snacking, and Eating Less Fruit and Veg,"* News Rx Health, 19, *(2019): 460.*

meal, or when you eat seconds or thirds. This large amount of food is far more than the average stomach is designed to handle.

Additionally, once food enters the mouth, we take a few bites and send the food down to the stomach. The stomach's job is to make those massive pieces of food microscopic in size, so when they get to the intestines, they can be absorbed into the bloodstream through tiny capillaries. A tremendous amount of work is required to convert a giant hamburger into a tiny element to be used for energy, growth, or some other process in the body. No wonder we are tired after we eat a large, heavy meal!

Overeating, probably more than any other factor, has contributed to the obesity epidemic in the United States. Obesity is a source of high stress for many.

Bernard Annebicque/Sygma/Getty Images

Overeating leads to obesity, a source of high stress.

15.4 Stress and Healthy Weight

Obesity has become a national epidemic and a leading cause of disease and death. Stress plays a unique role in the accumulation of excess body fat. Three factors help explain the role stress plays in contributing to obesity: eating to cope, unused glucose, and the cortisol connection.

Eating to Cope—The Food/Mood Connection

Some people respond to stress by overeating. Emotional eating is often mindless and unrelated to hunger. Some eat more because they gulp down meals too quickly. Others reach for snacks to calm their nerves and comfort themselves. These people use food as a coping mechanism to help them feel better temporarily. One theory is the connection between eating certain foods and the release of substances in the brain that feels soothing. For example, the consumption of carbohydrates is linked to changes in neurotransmitter levels.

When we eat, our body releases a chemical called **dopamine,** which makes us feel good immediately and can help offset the emotional pain we may be feeling from our stressful day. But food does not address the problem, nor does it help reduce stress levels. Avoid using food as a stress reliever by learning coping skills, such as exercise, meditation, or listening to music, that do not rely on food as a source of comfort. Downing a bag of M&Ms while you study for a test will not reduce your stress, and will more than likely increase it. A whole box of Twinkies may taste good, but it will result in added anxiety overall.

Unused Glucose

Second, when the mind activates the fight-or-flight response, it draws glucose from stored glycogen and fat. In preparation for action, a flood of nutrients, enzymes, and hormones moves into the bloodstream and toward target organs. The liver increases sugar levels (glucose) that go into the bloodstream; our stored-fat converts into blood sugar, and the liver releases cholesterol into the bloodstream for additional available energy. All these immediate actions result in a massive surge of glucose in the bloodstream. Unfortunately, when we don't use this blood glucose for physical activity, it quickly gets stored as fat.

Also, as you learned earlier in this chapter, the body responds to this increase in glucose by secreting insulin. In response to insulin, blood glucose levels fall (because glucose converts into fat cells), resulting in hunger and low energy. The result may be an increased desire to eat even more calories.

The Cortisol Connection

Third, activation of the stress response results in the massive secretion of the stress hormone cortisol. One of the jobs of cortisol is to store energy. The body remembers that when it encounters dangerous circumstances, food may not be available for a while (this is how things really happened for our ancestors of long ago), so it stores this energy as fat.

Commonly, the body stores this fat in the arteries and the abdomen, increasing the risk for an unhealthy cardiovascular system. Cortisol appears to bind to receptors on these fat cells, setting off a process that increases the number of fat cells and promotes the size of fat cells.

Too much or too little cortisol can alter blood sugar levels and metabolism, causing increased appetite and weight gain.[10] To get cortisol back to healthier levels, avoid the high-stress, low-sleep, no-exercise cycle that often goes with high cortisol levels, and avoid sugary and fatty foods when you're stressed.

Eating to cope, unused glucose, and the cortisol connection help explain how stress affects body weight, and especially body fat. Chronic stress contributes to weight gain. Added weight on the body is unhealthy and can be additionally stressful.

FYI

Freshman Five

Many college students don't gain the dreaded freshman 15 during their first year away from home. Still, according to a study from the University of Groningen, Netherlands, many do pack on nearly 5 pounds in their first 3 months of college. The researchers surveyed 1,095 freshman students (58% female, 42% male) at the beginning of their first semester in September about their weight and their health, daily habits, eating patterns, and physical condition. They assessed the students again during the last week of the semester in December. Here are a couple of their findings:

- Sixty-nine percent of the students gained weight, with an average increase of 5 pounds. Twenty-eight percent lost weight in the same period.
- Fifty-three percent of the students changed their intake of alcoholic beverages during this time; 30.7% of the students increased their alcohol intake, while 22.4% of the students decreased their alcohol intake.

Of all the factors that could have explained the increase in weight during the first semester at the school, the only two that had any measurable effect in this study were living independently and alcohol consumption.

Source: *"Weight Gain in Freshman College Students and Perceived Health," by P. de Vos, C. Hanck, M. Neisingh, et al,* Preventive Medicine Reports 2 *(2015): 229–234.*

15.5 Eating Disorders

Obesity is not the only issue related to stress and body weight. Eating disorders are increasing at an alarming rate. Anorexia, bulimia, and binge eating are accompanied by extreme emotions, attitudes, and behaviors surrounding weight and food issues. The accompanying emotional and physical problems can have life-threatening consequences for both females and males, although it is much more prevalent in females. For example, women tend to turn to binge eating in times of high stress more often than men. [11]

The number of women seeking treatment for eating disorders has risen alarmingly. Cynthia Bulik, the co-author of *Runaway Eating*, says that growing numbers of women engage in unhealthy eating behaviors to "run away" from emotional and stress-related problems. She defines **runaway eating** as the consistent use of food and food-related behaviors, such as purging or exercising excessively, to deal with unpleasant feelings and the sense that these feelings are out of control. Although the driving forces behind runaway eating and clinically defined disorders such as anorexia and bulimia are the same, the symptoms are not as severe or frequent for a runaway eater.[12]

Warning signs include alternating between severely restricting one's diet and eating large quantities of food; regularly performing exhausting exercise routines to burn off calories; and having at least 1 out-of-control binge in the last year. People with runaway eating often are desperate for tools to help with their problematic behaviors, but because they "fly beneath the radar" of the healthcare system, they usually are on their own.[13]

Types of Eating Disorders

Researchers have suggested that chronic stress may trigger abnormal eating and eating disorders.[13] The three most widely recognized eating disorders are anorexia, bulimia, and binge eating. Comprehensive coverage of these eating disorders is beyond the scope and intent of this book; however, awareness of some of the symptoms and contributing factors may promote early diagnosis and prompt treatment. Their connection with stress, and the potential impact of these disorders, make them too important to ignore.

Anorexia **Anorexia** is characterized by self-starvation and excessive weight loss. Symptoms of anorexia include:

- Refusal to keep body weight at or above a minimally healthy weight for height, body type, age, and activity level
- Intense fear of weight gain or being "fat"
- Feeling fat or overweight despite dramatic weight loss
- Loss of menstrual periods
- Extreme concern with body weight and shape

Bulimia **Bulimia** is characterized by a secretive cycle of binge eating followed by purging. The person with bulimia eats large amounts of food in short periods and then gets rid of the food and calories through vomiting, laxative abuse, or overexercising. Symptoms of bulimia include:

- Repeated episodes of binge eating and purging
- Feeling out of control during a binge and eating beyond the point of comfortable fullness
- Purging after a binge, typically by self-induced vomiting, abuse of laxatives, diet pills or diuretics, excessive exercise, or fasting
- Frequent dieting
- Extreme concern with body weight and shape

Binge Eating Disorder (also known as compulsive overeating) **Binge eating disorder** is characterized primarily by periods of uncontrolled, impulsive, or continuous eating beyond the point of feeling comfortably full. Although no purging is involved, the binge eater may fast sporadically or diet repetitively, and often feels shame or self-hatred after a binge. People who overeat compulsively may struggle with anxiety, depression, and loneliness, which can contribute to their unhealthy episodes of binge eating. Body weight may vary from normal to mild, moderate, or severe obesity.[14]

Causes of Eating Disorders

Although eating disorders may begin with a preoccupation with food and weight, they most often are about much more than food. Eating disorders are complex conditions that arise from a combination of long-standing behavioral, emotional, psychological, interpersonal, and social factors.

People with eating disorders often use food and the control of food to compensate for feelings and emotions that otherwise may seem overwhelming. For some people, dieting, binge eating, and purging help them cope with painful emotions and feel in control, but ultimately these behaviors will damage their physical and emotional health, self-esteem, and sense of competence and control.

Factors That Can Contribute to Eating Disorders

Eating disorders are complex conditions that can arise from a variety of potential causes. Once begun, however, they can create a self-perpetuating cycle of physical and emotional destruction. Eating disorders usually require professional help.

Psychological Factors

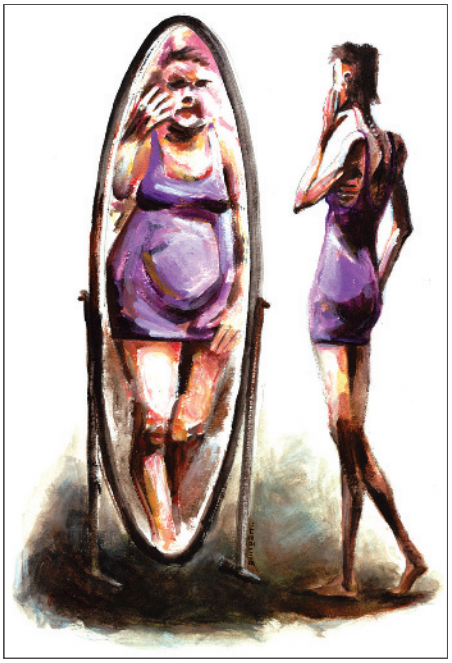
- Low self-esteem
- Feelings of inadequacy or lack of control in life
- Depression, anxiety, anger, or loneliness

Interpersonal Factors

- Troubled family and personal relationships
- Difficulty expressing emotions and feelings
- History of being teased or ridiculed based on size or weight
- History of physical or sexual abuse

Social Factors

- Cultural pressures that glorify "thin" and place value on the "perfect body"
- Narrow definitions of beauty that apply to only women and men of specific body weights and shapes
- Cultural norms that value people based on physical appearance and not inner qualities and strengths


Steven Golem/Media Bakery

A distorted body image can result in eating disorders like anorexia and bulimia. These disorders have a profound impact on the quality of life.

Other Factors Scientists are still researching possible biochemical or biological causes of eating disorders. In some individuals with eating disorders, certain chemicals in the brain that control hunger, appetite, and digestion are out of balance. The exact meaning and implications of these imbalances are still under investigation.

Stress has an impact on a wide range of factors related to eating and nutrition. Take the time to analyze your eating habits carefully, paying special attention to emotional factors associated with food and eating. Eating well is foundational to good health and positive stress management.

15.6 Sleep

Getting a good night's sleep isn't as easy as it used to be. According to the 2019 National Sleep Foundation poll, only 47% of Americans report waking and feeling extremely or very well-rested.[15] Getting quality sleep is vital to maintain good health. Insufficient sleep is responsible for a host of problems. Stress is often a contributing factor to sleep problems, and insufficient sleep contributes to stress.

Some common symptoms of sleep problems include difficulty going to sleep quickly, waking a lot during the night, waking up too early and not being able to get back to sleep, waking up feeling unrefreshed, snoring, unpleasant feelings in the legs (restless leg syndrome), or pauses in breathing. A good night's sleep is one in which you are fast asleep within a few minutes after your head hits the pillow, and the next thing you know, it is morning and you wake up feeling refreshed and alert.

It is easy to understand why it is difficult to fall asleep when we are stressed. The fight-or-flight response is one of arousal and activity—not rest. As we lie in bed trying to fall asleep, we simultaneously give our body systems messages that we should be on the alert for a potential threat—thinking over all the things that we must do tomorrow or all the problems we faced earlier today. These threat thoughts automatically activate the stress response. Consequently, we stay awake and alert.

Sleepy Connected Americans

So, what do we know about our sleep habits? Recent National Sleep Foundation's (NSF) Sleep in America polls have found that only 10% of American adults prioritize their sleep over other aspects of daily living such as fitness/nutrition, work, social, life, and hobbies/personal interests. Highlights of their polls include the following:

- **Many Americans report dissatisfaction with their sleep during the week.** A staggering 43% of Americans between the ages of 13 and 64 say they rarely or never get a good night's sleep on weeknights.
- **Communications technology use before sleep is pervasive.** Americans report very active technology use in the hour before trying to sleep. Almost everyone surveyed, 95%, uses electronics like a television, computer, videogame, or smartphone at least a few nights a week within the hour before bed. Interestingly, smartphones were sometimes a sleep disturbance. About 1 in 10 13–to 18-year-olds say that they are awakened after they go to bed every night or almost every night by a phone call, text message, or e-mail.
- **Teens and young adults are more often sleepy.** Roughly 1 in 5 of Generation Z'ers (13–to 18-year-olds) and Generation Y'ers (19–to 29-year-olds) rate as "sleepy" using a standard clinical assessment tool, compared to about 1 in 10 Generation X'ers (30–to 45-year-olds) and Baby Boomers (46–to 64-year-olds).
- **Coping with sleepiness through caffeine and naps.** Americans are dealing with tiredness by drinking caffeine. The average person

TIME TIP

"Believe it or not, I go to bed early and try to wake up early. I find that I can think more clearly and manage my load way better in the morning than I do in the evening. When I stay up to hang out with my roommates or to watch late-night television, I end up waking up in the morning later than I should and usually more tired. When this happens, I have a much harder time thinking clearly or getting my stuff done quickly. Here is my tip: I write my sleep time in my schedule book and make it a priority as important as my other commitments."

—Sam N.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

on a weekday drinks approximately 3 12-ounce caffeinated beverages, with little difference between age groups. Four in ten respondents reported intentionally napping at least once in the previous week. Eleven percent of poll respondents took naps on at least 5 of the past 7 days.

How Much Sleep Do You Need?

There is no right amount of sleep for everyone. Some people function fine with 6 hours of sleep, and others can't function optimally with less than 9 hours. Most people need 7 to 8 hours of sleep each night.

Tip: To find out how much sleep is best for you, try the following experiment. For 4 days in a row, go to sleep at about the same time each night. During these days, avoid unusual or excessive activities such as too much exercise or drinking alcohol. Allow yourself to awaken each morning naturally without an alarm. Take a moment each morning to calculate the amount of time you slept. Calculate the average amount of sleep you get per night by adding each night's sleep time and then divide by the number of nights. This will give you a good sign of the amount of sleep that is best for your mind and body.

STRESS STUDIES

Sleep and Depression

In a study with 24,715 respondents, adults were surveyed to explore the association between depression and insomnia. The results showed that not only did insomnia lead to depression, but depression also was shown to lead to insomnia. Getting enough sleep appears to have a beneficial effect on depression.

Source: *"The Bidirectional Association Between Depression and Insomnia: The HUNT Study," by B. Sivertsen, P. Salo, A. Mykletun, M. Hysing, S. Pallesen, S. Krokstad, & S. Overland,* Psychosomatic Medicine, *74(7) (2012): 758–765.*

Healthy Sleep Advice

Once we reduce our stress levels, we may find that sleep occurs naturally and effortlessly. Here are suggestions for improving sleep:[15]

- **Set and stick to a sleep schedule.** Go to bed and wake up at the same times each day.
- **Expose yourself to bright light in the morning, and avoid it at night.** Exposure to bright morning light, especially sunlight, energizes us and prepares us for a productive day. Exercising outdoors in the morning can help you get the sun exposure you need to set your biological clock. Alternatively, dim your lights when it's close to bedtime. Our bodies require darkness to stimulate the production of the sleep hormone melatonin.
- **Exercise regularly.** Design a schedule of daily physical activity. Mix up your activities to keep from getting bored, and follow the exercise suggestions found earlier in this chapter. Avoid vigorous exercise close to bedtime if you have problems sleeping.
- **Establish a relaxing bedtime routine.** Allow enough time to wind down and relax before going to bed.
- **Create a cool, comfortable sleeping environment that is free of distractions.** If possible at night, open the windows to allow cool fresh air into your room.
- **Unplug!** Dim the lights in the evening, and remove the TV, computer, iPhone, and other electronic gadgets from the bedroom.
- **Treat your bed as your sanctuary from the stresses of the day.** If you find yourself still lying awake after 15 to 20 minutes, get up and do something relaxing in dim light until you are sleepy. Once you feel tired, retreat to the sanctuary of your bed.
- **Keep a "worry book" next to your bed.** If you wake up because of worries, write them down with an action plan and then forget about them until morning.
- **Avoid caffeinated beverages, chocolate, and tobacco in the late afternoon and at night.**
- **Avoid large meals and beverages before bedtime.** If it takes you a long time to fall asleep, it is especially important to minimize high-glycemic index carbohydrates and saturated fats at dinner and later in the evening.
- **No nightcaps.** Drinking alcohol before bed can rob you of deep sleep and cause you to wake up too early.

Diego Cervo/Shutterstock.com

Excellent sleep is an undervalued but very important part of a healthy lifestyle.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

VeronikaChe/Shutterstock.com

An individual with high stress levels is approximately 15 times more likely to be a smoker than a person with low stress levels.

FYI

Alternative Sleep Boost

Try an evening foot soak. This traditional Chinese medicine therapy is believed to dilate the vessels in the lower extremities, which draws energy away from the head. Fill a tub ankle deep with warm water and immerse your feet for 10 minutes. Adding a few drops of a relaxing essential oil may promote even greater relaxation.

FYI

Only 3% of Americans Follow a Healthy Lifestyle

Growing research shows that following a healthy lifestyle has substantial health benefits. Many public health messages emphasize the importance of adopting healthy lifestyle habits, but when it comes to healthy living, Americans have a long way to go. The results of one study found that only 3% of Americans follow all 4 essential healthy lifestyle habits: not smoking, maintaining healthy body weight, consuming five or more fruits and vegetables per day, and exercising at least moderately for 30 minutes or more at least 5 days per week.

Source: *"Are You Living a 'Healthy Lifestyle?'" by M. Stoppler, MedicineNet.com, retrieved March 12, 2014, from http://www.medicinenet.com/script/main/art.asp?articlekey=46947.*

- **Avoid medicines that delay or disrupt your sleep.** If you have trouble sleeping, ask your doctor or pharmacist if your medications might be contributing to your sleep problem.
- **No late-afternoon or evening naps, unless you work nights.** If you must nap, keep it under 15 minutes and before 5:00 p.m.

A good night's sleep, regular exercise, and a healthy, balanced diet are vital elements of a healthy lifestyle and essential ingredients for your successful stress management plan. But it is not just what you do that is important; equally important are behaviors to avoid.

15.7 Lifestyle Behaviors to Avoid

In our culture, chemicals are a common choice for combating stress. The next time you watch a movie that portrays very stressed people, notice what they do. You may hear something like, "I could use a stiff drink." Another common choice is to make a beeline to the medicine cabinet for the most potent magic bullet they can find (usually in the form of a tranquilizer). Others reach for a cigarette as a way to relax. These chemicals may seem like a good short-term fix, but they come with a cost.

Tobacco

An individual with a high stress level is 15 times more likely to be a smoker than a person with low stress. About half of smokers name workplace stress as a critical factor in their smoking.[6] Inability to cope with stress has long been associated with risky health behaviors such as smoking in adolescents and young adults. Many young people justify smoking as a means of dealing with stress.[16]

Nicotine is a dangerous and highly addictive stimulant. The effects of nicotine mimic those of the stress response in many ways, among them:

- Increase in heart rate
- Increase in blood pressure
- Increase in the output of cholesterol into the blood
- The decrease in the size of blood vessels (it's especially dangerous when this happens to arteries in the heart or brain)
- Increase in blood clotting

If the result of tobacco use can be a heart attack or a stroke, why do people often "have a smoke" when they feel stressed? There are several reasons. While smoking, the person may get an immediate "buzz" from the nicotine that feels better than the pain of the stress. Smoking also is a familiar behavior that results in a feeling of being in control—even though the nicotine is truly in control. By going outside in the fresh air or to a designated smoking area, the smoker may escape a stressful environment. Another reason a person might feel more relaxed by smoking is that smoking results in breathing differently—inhaling more deeply, for example, which can be relaxing. Whatever the reason people choose to smoke, it is an unhealthy and ineffective way to manage stress because of the harmful long-term effects.

Alcohol

Excessive alcohol consumption is a prevalent problem on many college campuses, as students away from home for the first time may feel overwhelmed and insecure. Many turn to alcohol to let loose and feel accepted. Students sometimes use alcohol as a form of self-medication to temporarily ease feelings of pain or stress.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

CULTURE CONNECTION Risky Business

Many college students engage in risky, unhealthy behaviors, including alcohol use, tobacco use, physical inactivity, and unhealthy eating practices. The failure of college students to participate in healthier lifestyle practices is not unique to the United States. Researchers surveyed university students from 9 ASEAN countries regarding their diet, BMI, tobacco use, alcohol use, and physical activity.

Across all 9 countries:

Among men −27.5% were overweight or obese, 39.0% engaged in low physical activity, 6.9% were current tobacco users, 10.1% had been involved in binge drinking in the past month, and 62.7% did not avoid eating fat and cholesterol.

Among women −16.9% were overweight or obese, 53.0% engaged in low physical activity, 2.5% had used tobacco in the past month, 4.2% had been involved in binge drinking in the past month, and 58.2% did not avoid eating fat and cholesterol.

Source: "Prevalence, Risk Awareness and Health Beliefs of Behavioural Risk Factors for Cardiovascular Disease Among University Students in Nine ASEAN Countries," by K. Peltzer & S. Pengpid, *BMC Public Health, 18*(1) (2018): 237.

Adolescents often use alcohol before and during the early college years. Drinking by adolescents and young adults is influenced by some unique factors: The adolescent's brain is unique and differs from that of both younger individuals and adults in ways that predispose adolescents to behave in specific ways, increasing their sensitivity to stressors and their propensity to initiate alcohol use.[17]

Alcohol consumption on college campuses is associated with where students live on campus and what they perceive as the norm for acceptable drinking. Studies have found that stress-related drinking is frequent, especially in competitive academic environments where students turn to alcohol to reduce their anxiety and pressure to perform. Interestingly, intercollegiate athletes drink less frequently compared with intramural/club athletes but consume larger quantities when they do drink.[18] Fraternity members are among the heaviest drinkers, with a high incidence of both heavy drinking and binge drinking.[6]

astarot/Shutterstock.com

Stress-related drinking is frequent, especially in competitive academic environments where students turn to alcohol to try to reduce their anxiety and the pressure to perform.

The association between alcohol and stress is complicated because genetic and environmental factors, along with life experiences, impact both drinking behavior and an individual's response to stress. Racial and ethnic variables may also play a part.

Studies indicate that people drink as a means of coping with economic stress, job stress, and marital problems, often in the absence of social support, and that the more severe and chronic the stressor, the higher the alcohol consumption.[19] Whether an individual will drink in response to stress, however, seems to depend on several influences. Some of them include:

- Those with a history of family alcoholism
- Children whose mothers drank during pregnancy
- People who experienced childhood abuse or neglect
- Those with other mental health issues.[20]

Although most people drink because they think it will help them reduce stress, more than one or two drinks per day can lead to many problems, including alcoholism, liver diseases, various cancers, and many types of accidents. Drinking is also associated with other unhealthy behaviors such as smoking, sexual aggression, and violence.

If you need help to reduce your drinking, support is available. Student health and counseling services are prepared to help you. Excessive alcohol consumption is an unhealthy, ineffective strategy for preventing stress. This book has plenty of other more useful, healthy ways of coping with stress.

STRESS BUSTING BEHAVIOR

Healthy Choices

Consider the items that are currently part of your routine. Which items do you think have the most significant positive impact on your ability to manage your stress? Which items do you feel you need to work on the most?

○ Cardiorespiratory exercise
○ Muscle fitness exercise
○ Flexibility exercise
○ Body composition exercise
○ Eating a balanced diet from a variety of healthy foods
○ Avoiding excessive caffeine
○ Maintaining a healthy weight
○ Avoiding eating to cope with stress
○ Getting 7 to 8 hours of sleep each night
○ Abstaining from tobacco products
○ Avoiding the use of alcohol to cope with stress
○ Not using drugs to cope with stress

STRESS STUDIES

What Are the Differences in Addiction Between Men and Women

Since the 1990s, when women were included regularly in addiction studies, some interesting differences have been found between men and women and their use of alcohol and drugs:

- Men are more likely to abuse illicit drugs and alcohol—11.5% of males have a substance use disorder, compared to 6.4% of females. However, women are more likely to go to the emergency room or fatally overdose due to substance abuse.
- Men are more likely to become addicts.
- Women are more likely to transition from substance abuse to substance dependence and do so at a faster pace.
- Men are more likely to abuse substances due to peer pressure or to be part of a group.
- Women are more likely to self-medicate with illicit substances.
- Men are more likely to experience more intense symptoms of alcohol withdrawal.
- Women are more likely to suffer substance abuse side effects (like liver damage) and overdose.
- The risk of relapse for men is less likely (i.e., more extended periods of abstinence).
- Women are more likely to experience intense cravings and relapse.
- More men fatally overdose as a result of opioid abuse.
- Women are more likely to misuse prescription opioids to self-medicate for pain or anxiety.

Source: *"The Differences in Addiction Between Men and Women." Addiction Center, retrieved December 5, 2019, from https://www.addictioncenter.com/addiction/differences-men-women/.*

Drugs

We live in a society in which many people turn to drugs to try to fix problems. Choosing drugs and alcohol as a way of coping with stress is an unhealthy choice, with many negative consequences. Because of the prevalence of the use of two drugs—tobacco and alcohol—by college students, we focused in this chapter on these two, and their impact on stress. Although alcohol is the number-one drug of abuse among college students, marijuana is the most commonly used illegal drug.[21] With the legalization of marijuana in some states, it will be essential to stay alert to the impact of marijuana use on the mental, emotional, and physical health of consumers. Some students turn to many other drugs, both legal and illegal, in a quest to find peace of mind.

Illicit drugs are unhealthy and ineffective at reducing stress. The results can be deceptive because some drugs create a cycle of dependence by masking the symptoms of stress, which results in temporarily feeling better.

Nevertheless, drugs do not end the cause of stress. Fortunately, there are better tools than mind-numbing chemicals to reduce stress. Compelling research, along with strong anecdotal evidence of individual successes, demonstrates that specific stress-management techniques work powerfully and immediately to reduce stress effectively.

Occasionally, prescription or over-the-counter drugs are needed, but these must be used with care. When people turn to tranquilizers to relax, they run the risk of becoming dependent and incurring the side effects that often go with drug use. Your healthcare provider can help you determine if you need medication.

15.8 Conclusion

This chapter is about preventing and managing stress through healthy lifestyle choices. Understanding that making healthy choices and living a healthy lifestyle is fundamental to well-being is not a new idea. The challenge is the gap between *knowing* and *doing*.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

While you can't shut out stress and illness entirely, through healthy lifestyle choices, you can make your body a place where health thrives. Exercising, eating clean, getting adequate sleep, and avoiding unhealthy behaviors are the foundations for wellness.

Now that you have read this chapter, take some time to reflect on your daily choices carefully. Think about how you can use the information in this chapter to feel better and more in control of your stress. Pay attention to both the healthy and the unhealthy ways you choose to deal with stress. Decide how you can integrate healthier options into your routine, and drop the unhealthy behaviors. Even minor changes, consistent and over time, can yield impressive results.

ACTIVITY

15.1 The Power of Exercise to Reduce Stress

Purpose The purpose of this activity is to help you see the benefits of including exercise as part of a healthy lifestyle to help you reduce stress. Exercise, especially slightly higher intensity exercise like jogging or playing racquetball, follows through on the message to move that is inherent in the fight-or-flight response.

Directions Exercise using any activity that will keep your heart rate elevated for 30 to 60 minutes. Do this activity at a time when you feel very high levels of stress, such as just before or after an important test or after you've been in an intense argument with someone. During this time of extreme stress, instead of watching TV, sitting and dwelling on the event, or grabbing a beer, move. Do something with enough intensity that you get out of breath and find yourself sweating.

After you finish, notice the change in how you feel. Indeed, the environmental conditions haven't changed, but you have followed through on the message you have been giving yourself to fight or run (fight-or-flight response), and you can now approach the situation in a calm, level-headed way. Respond to these statements:

1. Describe the cause of your stress.
2. How did you feel before you started exercising?
3. What exercise or activity did you select?
4. Describe how you felt physically, emotionally, and mentally after your exercise session.
5. Explain in your own words how exercise works to manage stress.

Key Points

- Lifestyle habits have a significant impact on our ability to prevent and manage stress.
- Exercise is one of our most potent stress buffers.
- An exercise program should combine cardiorespiratory fitness, optimum body composition, muscle fitness, and flexibility.
- The best nutritional preparation for stress is a varied and balanced diet. The *Dietary Guidelines for Americans* and *MyPlate* supply science-based guidance for nutritional health.
- Three factors that help explain how stress contributes to obesity are eating to cope, unused glucose, and the cortisol connection.
- Eating disorders—anorexia, bulimia, and binge eating disorder—have a clear connection to perceived stress and control.
- Getting adequate sleep is essential to maintain good health and reduce stress.
- To support a healthy lifestyle, people should avoid tobacco, alcohol, and drug use.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

Key Terms

- cardiorespiratory fitness
- muscle fitness
- muscle strength
- muscle endurance
- flexibility
- body composition
- *Dietary Guidelines for Americans*
- reference daily intakes (RDI)
- serotonin
- glycemic index
- dopamine
- runaway eating
- anorexia
- bulimia
- binge eating disorder

References

1. “A Count of Coping Strategies: A Longitudinal Study Investigating an Alternative Method to Understanding Coping and Adjustment,” by T. Heffer & T. Willoughby, *PLoS ONE, 12*(10) (2017): e0186057.
2. “Exercise Fuels the Brain’s Stress Buffers.” Dishman, R. & Sothmann, M., retrieved November 20, 2019, from https://www.apa.org/helpcenter/exercise-stress.
3. “Cardiovascular Reactivity, Stress, and Physical Activity,” *Frontiers in Physiology, 4* (2013): 314.
4. “The Science of Exercise,” by J. Metzl, retrieved July 3, 2019, from https://www.acsm.org/blog-detail/acsm-blog/2017/05/16/science-of-exercise.
5. “Attitude Adjustment,” by L. Shelton, *Natural Health, 34*(3) (2004): 42–44.
6. *An Invitation to Health: Choosing to Change,* by D. Hales (Belmont, CA: Wadsworth/Cengage Learning, 2011).
7. “Energy Drinks,” *NIH: National Center for Complementary and Integrative Health*, (July 26, 2018), retrieved on December 5, 2019, from https://nccih.nih.gov/health/energy-drinks.
8. “The Safety of Ingested Caffeine: A Comprehensive Review,” by J. L. Temple, C. Bernard, S. E. Lipshultz, J. D. Czachor, et al., *Frontiers in Psychiatry, 8*, (2017): 80.
9. “Caffeine Stimulation of Cortisol Secretion Across the Waking Hours in Relation to Caffeine Intake Levels,” by W. R. Lovallo, T. L. Whitsett, M. al’Absi, B. H. Sung, A. S. Vincent, & M. F. Wilson, *Psychosomatic Medicine, 67*(5) (2005): 734–739.
10. “Association between Higher Serum Cortisol Levels and Decrease Insulin Secretion in a General Population,” by A. Kamba, M. Daimon, H. Murakami, et al., *PLoS ONE 11* (2016): e166077.
11. “Examining the Mediating Roles of Binge Eating and Emotional Eating in the Relationships between Stress and Metabolic Abnormalities,” by A. Chao, M. Grey, R. Whittemore, J. Reuning-Scherer, C. M. Grilo, & R. Sinha, *Journal of Behavioral Medicine, 39*(2) (2016): 320–332.
12. “Women Binge to Relieve Stress,” *USA Today Magazine, 133*(2719) (2005): 2.
13. “Stress Hormones and Eating Disorders,” by R. Chami, A. M. Monteleone, J. Treasure, & P. Monteleone, *Molecular and Cellular Endocrinology, 497* (2019): 110349.
14. “Binge Eating Disorder,” National Eating Disorder Association, retrieved December 5, 2019, from http://www.nationaleatingdisorders.org.
15. “Sleep Health & Scheduling,” National Sleep Foundation, retrieved July 3, 2019, from http://www.sleepfoundation.org.
16. “Nicotine, Adolescence, and Stress: A Review of How Stress Can Modulate the Negative Consequences of Adolescent Nicotine Use,” by E. Holliday & T. J. Gould, *Neuroscience and Biobehavioral Reviews, 65* (2016): 173–184.
17. “Section 2: Alcohol Use and Adolescent Development,” National Institute on Alcohol Abuse and Alcoholism (US); Substance Abuse and Mental Health Services Administration (US). Rockville (MD): Office of the Surgeon General (US); 2007.
18. “Examining Drinking Patterns and High-Risk Drinking Environments Among College Athletes at Different Competition Levels,” by M. Marzell, C. Morrison, C. Mair, S. Moynihan, & P. J. Gruenewald, *Journal of Drug Education, 45*(1) (2015): 5–16.
19. “Effects of Stress on Alcohol Consumption,” by R. Anthenelli & L. Grandison, *Alcohol Research: Current Reviews, 34*(4) (2012): 381–382.
20. “The Link Between Stress and Alcohol,” by D. B. Block, *Verywell Mind*, (November 17, 2019), retrieved from https://www.verywellmind.com/.
21. “Marijuana Use among US College Students Reaches New 35-Year High,” by M. Sherburne, *Michigan News: University of Michigan, 50*(1) (September 5, 2019), retrieved from https://news.umich.edu/marijuana-use-among-us-college-students-reaches-new-35-year-high/.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

chapter 16

Introduction to Relaxation

Studio Pet Photos/Shutterstock.com

> But, of course, the instant I try to make myself relax, true relaxation vanishes, and in its place is a strange phenomenon called trying to relax. Relaxation happens only when allowed, never as a result of trying or making.
>
> —*W. Tim Gallway*

What is relaxation, and how does it differ from merely unwinding in front of the television to enjoy some rest?

What should I do if I try one of the relaxation exercises in the following chapters, and it doesn't help me relax or feel any better?

How can I get the most out of a relaxation technique?

Learning Objectives

Study of this chapter will enable you to do the following:

16.1 Define and explain relaxation.

16.2 Identify the benefits of relaxation.

16.3 Explain tips for a successful relaxation experience.

16.4 Experience the benefits of the Power Nap.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

Real People, Real Stories

The Power Nap Experience I love this exercise! Before I started the Power Nap for the first time, I was feeling really tensed up from the day, yet tired and ready to go to bed. So, the Power Nap was an excellent opportunity for me to calm myself down before bed. I was a little apprehensive about trying it. I wondered what it would be like. During the Power Nap session, it was surprising for me to feel this relaxed. I had no idea how relaxed I could be. I was actually only focusing on one thing at once, not a million things. It was so surprising that I actually started laughing! After the Power Nap, I dropped right into bed and slept better than I had in a long time. The whole night was undisturbed. I woke up quickly, which was so awesome because lately, it has been *SO HARD* for me to wake up! I think I'll be doing this every night.

—*Nikki R.*

***

The first time I did the Power Nap exercise, I was exhausted. My kids had just gone down for a nap. I was tired but still had a million and one things that needed to be done. I didn't have time to take a 2-hour nap.

Then I started the Power Nap exercise. My whole body fell asleep, except I was conscious of what was going on. As I continued the exercise, my body became numb. It was an awesome feeling. After I finished, I felt like I had just taken a nap. However, I didn't have the groggy, yawning feeling of being awakened from a long nap. I began to do the things that needed to be done around the house. About an hour later, I didn't even remember that I had been tired earlier in the day. I felt recharged. I fell asleep quickly that night because I had not napped long during the day. The second time I did the Power Nap exercise was after getting home from work at 11:00 pm. I was thoroughly drained of all energy. After I was done with the exercise, I felt like a zombie. I walked straight into my bedroom and melted into my bed. I didn't have a problem falling asleep and slept exceptionally well. When my children woke me at 7:00 am the next morning, I wasn't tired or ornery. I was ready for the day! It's incredible what those 10 minutes can do for your body and mind. I'm delighted with this exercise!

—*April L.*

> Stress is inner biofeedback, signaling you that frequencies are fighting within your system. The purpose of stress isn't to hurt you, but to let you know it's time to go back to the heart and start loving.
>
> —*Sara Paddison*

16.1 Introduction to Relaxation

If we could manage our stress by controlling our thoughts and actions in the ways we have described thus far, this book could end here. We would have solved the problem of too much stress. In the real world, however, despite our best efforts to prevent stress, it happens. The stress response turns on automatically, and we experience common stress symptoms. If you live a typical, modern-day life, stress is unavoidable. Consequently, we need tools that we can call upon immediately to shut down the stress response and, thus, avoid the health problems associated with chronic stress.

Part III covered a variety of stress-prevention strategies, with an emphasis on changing the ways we think about potential stressors and reducing or eliminating the number of stressors in our lives. But what do you do when you forget to use those strategies? You need tools that work differently to reduce the effects of stress arousal by easing you into relaxation. In Part IV, you will learn a variety of ways to reduce stress and tension through techniques that calm your mind and put your body into a relaxed state. These techniques work primarily on the mental and physical dimensions. As you will learn, cognitive relaxation techniques such as guided imagery, autogenics, and meditation have a powerful effect on reducing stress at the mental level. When you relax the mind, the body relaxes as well. Physical techniques such as massage, progressive relaxation, breathing, and yoga alter the body's physiology. These physical methods can diminish stress by turning tension into relaxation.

FYI

Stress Balls to the Rescue

You have probably come across at least 1 of the many stress-relief products advertised as you address your stress troubles. It might have been in the form of a relaxation candle or a unique, scented pillow. Maybe it was tension-reducing tea—drink a cup and all your cares will disappear.

Do these stress-relief products work? The answer is: It depends. Some products, such as soft, squeezable stress balls, might help reduce muscle tension like progressive muscle relaxation. Others, such as relaxation candles, won't work alone, but in conjunction with soaking in a warm bubble bath, they might help. But don't expect any magic cures or secret potions. Most stress products won't hurt, and some will help, especially if combined with a stress reduction exercise.

So, what works best to turn off your stress? You get to decide. As you learn these techniques, the most effective are likely to be those matching your preferred way of mental processing.[1] If you are auditory (you like words and dialogue), you may prefer to meditate on a meaningful word or phrase or relax to a guided mindful meditation. A visual processor may prefer imagining a beautiful scene, such as the Mountain Lake guided imagery, or meditating on an image. Someone who likes physical feelings and touch may do best with relaxing breathing or muscle relaxation methods that give you sensations of tangible tension release. Someone geared toward spirituality may enjoy a more profound experience, like the Inner Wisdom guided imagery. Used together, the mental and physical relaxation techniques produce immediate and profound relaxation.

relaxed
stressed

Filipe Frazao/Shutterstock.com

Stress or relaxation: Which direction will you choose?

16.2 Understanding Relaxation

The *Oxford Dictionary of English* defines relaxation as (1) the state of being free from tension and anxiety and (2) the restoration of equilibrium following disturbance. Within the health literature, relaxation is described as "a state of relative freedom from both anxiety and skeletal muscle tension."[2] Herbert Benson, the author of *The Relaxation Response*, defines relaxation as "a state of decreased psychophysiological arousal: a calming state."[3] For purposes of this text, we will define **relaxation** as the process of effectively moving the mind/body from the stress response—decreased sympathetic nervous system activity—to the relaxation response—increased parasympathetic nervous system activity. As you have learned, the relaxed state is characterized by both a calm mental state and the reduction of physiological functions such as muscle tension, heart rate, blood pressure, and breathing rate.

Real relaxation requires commitment and action. This might sound like a contradiction, but fortunately the effort involved in stress reduction is the kind that produces enjoyable, positive results. The purpose of relaxation techniques is to activate the parasympathetic nervous system directly. Relaxation exercises turn off the stress response and, at the same time, produce an increase in mental alertness and mental performance. Some of these exercises also tend to increase physical energy.

> Relaxation is the prerequisite for that inner expansion that allows a person to express the source of inspiration and joy within.
>
> —*Deepak Chopra*

Relaxation, as defined in this chapter, is not the same thing as watching television, reading an enjoyable book, or even viewing a sunset. It also is not the same thing as daydreaming or letting the mind wander. These things are easy to do, and they are pleasant and enjoyable, but they aren't designed to activate the relaxation response. Relaxation isn't even the same as sleeping or napping. The stress response can be activated even

STRESS STUDIES

Relaxation Techniques Reduce Pain

Musculoskeletal pain is a common symptom of chronic stress. Chronic muscle and joint pain often show up in the forms of arthritis, fibromyalgia, and neck and back pain. Chronic pain affects us both physiologically and psychologically. Often, other problems arise because of chronic pain, such as sleeping disorders, fatigue, and mood disturbances. The hypothesis: If we can reduce muscle tension through relaxation techniques, we can also reduce muscle and joint pain, along with the resulting symptoms. A meta-analysis of the research looking at relaxation techniques as they relate to musculoskeletal pain was conducted to determine if this hypothesis could be supported. The investigators searched the literature and found several studies where relaxation techniques such as progressive muscle relaxation, autogenic training, hypnosis, guided imagery, and biofeedback had been tested for their effect on musculoskeletal pain.

The researchers summarized these positive outcomes in muscle pain when relaxation techniques were applied:

- A decrease in musculoskeletal pain intensity
- A decrease in anxiety, depression, and fatigue (in fibromyalgia)
- An increase in mobility, balance, and coordination
- An increase in the sense of personal control
- A reduction in medication and health costs

Relaxation exercises might be an effective, inexpensive way to manage pain without the side effects that come with pain medication.

Source: *"Relaxation as Treatment for Chronic Musculoskeletal Pain: A Systematic Review of Randomized Controlled Studies," by G. Gard et al.,* Physical Therapy Reviews, *13(5) (2008): 355–365.*

when you sleep—as anyone who sleeps with a teeth-grinding partner will attest. You can't be stressed and relaxed at the same time.

Some methods of relaxation found in the following chapters may be familiar to you, and others may be new and seem unusual, yet each is effective. Approach each new technique with an open, curious mind, and see which ones work for you. Several of the relaxation exercises are on the CengageBrain website. Instructions for finding the relaxation exercises are available at the end of each chapter in Part IV.

16.3 Benefits of Relaxation

Why relax? With so many things to do, it's easy to put off taking time to relax each day. But by doing so, you miss the health benefits of relaxation. According to experts at the Mayo Clinic,[4] relaxation can improve how your body responds to stress in the following ways:

- Slows your heart rate, which translates into less work for your heart
- Reduces your blood pressure
- Slows your breathing rate
- Reduces the need for oxygen
- Increases blood flow to the major muscles
- Lessens muscle tension

After practicing relaxation skills, you may experience the following benefits:

- Fewer symptoms of sickness or illness
- Fewer pains such as headaches and muscle pain
- Less nausea and diarrhea
- Fewer emotional responses such as anger, crying, anxiety, apprehension, and frustration
- More energy
- Improved concentration
- Better ability to manage problems
- More efficiency in daily activities

Relaxation produces many health benefits. As you learn to relax, you will become more aware of muscle tension and other physical sensations caused by the stress response. In time, you may even notice your body's reaction before you are aware of your stress. Once you know how the stress response feels, you can make a conscious effort to switch to relaxation mode the moment your muscles start to tense. You will enjoy many benefits when you move from physical and psychological arousal to relaxation.

16.4 Getting Started

In this section of the book, you will discover a wide range of relaxation techniques that you can immediately include in your busy days to help you reduce stress. As you learn new relaxation methods, these suggestions can help make your experience more pleasant and productive. Once you are more experienced, you may find you can get results anywhere at any time, but while you are learning, the following suggestions are helpful:

- *Use your smartphone with headphones.* The best way to listen to the relaxation exercises is with an iPod, smartphone, or other audio device, and using headphones. This way, you can listen with the highest clarity and the fewest distractions.
- *Go dark and quiet.* The ideal setting for doing these relaxation exercises is in a place where your environment is mostly dark and quiet. Seclude yourself where you will not be interrupted. They have the best effect if you do them while sitting in a comfortable reclining chair, on a mat on the floor, or on a bed.
- *Minimize background noises.* Turn off the telephone and any devices that might have an alarm.
- *Stay warm.* If you tend to feel cold while you lie on the floor or on a bed, use a blanket to cover yourself, to help you stay warm.

- *Do them during the day or at night.* The relaxation exercises work to turn off your stress at any time of the day. Several of them work powerfully to help you fall asleep very quickly. With practice, you will find what works best for you.
- *Pay close attention to the instructions at the beginning.* Each relaxation exercise will have a short set of instructions at the beginning. Pay close attention. The instructions will guide you on how to participate in each exercise. Each relaxation exercise is slightly different.
- *Don't finish it if you feel like sleeping.* If you are doing an exercise just before falling asleep at night, don't feel compelled to complete the activity. If you feel the urge to fall asleep while you are listening, allow yourself to sink into a silent sleep. You'll experience a very deep and profound rest as you do.
- *At night, be sure it's the LAST thing you do.* If you are using a relaxation exercise to help you fall asleep, make sure the relaxation exercise is the last thing you do before falling asleep. Don't do a relaxation exercise late in the evening and then continue with other activities. If you do, there is a good chance that you'll have more difficulty falling asleep later on.
- *Don't force relaxation.* As you do these relaxation exercises, don't try too hard to make anything happen. It is better to have a passive attitude. Be interested, curious, and open to the experiences you'll have with them. Don't try to make or force anything to happen.
- *When your mind wanders, gently refocus.* As you do an exercise, there will be times when your mind will wander, or you'll feel like you can't stay focused. Be gentle with yourself when this happens. Simply return your awareness to the instructions when it occurs to you to do so.
- *Let environmental sounds help you refocus.* If you hear noises in your immediate environment, simply let those sounds remind you to return to the instructions. There's no need for the sound of your busy thoughts or external sounds to be annoyances or distractions. Just let them remind you to return to the instructions.
- *Don't hurry to finish.* Probably the most important thing to remember with each relaxation exercise is how you end it. Do not be in a hurry to finish a relaxation exercise. Take your time to return to ordinary consciousness, carefully following the directions as you hear them. If you don't, you may end up feeling worse afterward; you may experience the same feeling you get when you are abruptly jolted out of a pleasant dream.
- *Approach each exercise without expectations.* The best attitude is one of openness to whatever results you experience. As you practice, say to yourself, "I will take what I get. If I get nothing, that's what I get . . . and that's okay. If I get some deep relaxation, that's what I get as well. It's also okay if I feel rejuvenated and energized." Trying too hard to make the exercise work will counteract the desired effects. This vital requirement for many of the relaxation techniques is called **passive alertness** or passive concentration. This passive mental state is a state of mind which is relaxed, non-striving, and unconcerned with the results. This means just letting what happens happen.
- *What about strange sensations?* If you experience strange or unusual sensations while doing a relaxation exercise, keep a passive, interested awareness of what you notice but keep your focus on the instructions. Don't make a big deal out of any unusual sensations. They aren't uncommon, and they usually subside soon after they begin.
- *Not every relaxation technique works the same for everyone.* Experiment with the different methods to discover which techniques are most effective for you. Soon you will find that some of the exercises relax you and restore your energy, while others have no noticeable effect on you.
- *Try each method several times.* With regular practice, the positive effects of relaxation carry over into daily activities. Just like the weightlifter gets stronger with consistent training, the regular practice of relaxation exercises produces profound and noticeable results. We find ourselves calmer and more composed, less easily irritated, and feeling better generally. When that happens, the benefits spill over into other areas of life. Relationships may improve; we enjoy our days more; and life in general seems better. These are natural by-products of regular practice. We simply need to practice and watch for the results.
- *Give yourself a minimum of 10 to 20 minutes each day to practice a relaxation activity.* If you struggle with symptoms of stress, the more you can perform the relaxation exercises,

the more you'll notice results. Just like getting regular exercise and eating a healthy diet, practicing relaxation exercises is an essential part of a healthy lifestyle.

- *Keep an open mind.* Regardless of how unusual these exercises might seem to you, they are useful in turning off the stress response and restoring balance. If you notice yourself resisting an exercise because it seems odd, acknowledge the thought and continue with an open, curious mind. Don't let the unusual nature of the practice prevent you from experiencing it fully.
- *Don't judge a relaxation technique based only on what happens while you do it.* The most important aspect of a relaxation exercise is not necessarily what happens during the relaxation exercise, but how you feel after you have completed it. You may feel incredible during the activity; you might also find that your mind moves a million miles a minute; or you may be quite physically involved, as is the case with progressive relaxation. The real benefits of doing the exercise may occur later when you return to the activities of your day feeling more balanced, alert, relaxed, refreshed, or energized.

Research has yet to thoroughly explain why relaxation exercises work so well. Autogenics and meditation are good examples. We don't know exactly why the simple repetition of a word produces such deep and profound rest, but deep relaxation happens even without a full understanding. The weightlifter may not be able to explain why or how muscles get bigger from lifting heavy weights for many repetitions. If lifting weights produces the desired results, it may not even matter. Similarly, with relaxation exercises, it is not always necessary to understand why the process works to enjoy its positive benefits.

16.5 Relaxation Sensations

Individuals may experience a variety of sensations while practicing relaxation exercises:

- Tingling
- Warmth
- Coolness
- Floating
- Swirling
- Spinning
- Heaviness
- A pleasant numbness or seeming inability to move a part of the body
- More pronounced heartbeat
- Distortions in your sense of time (you may perceive time moving extremely fast or slow—usually fast)
- Light-headedness

These sensations typically feel pleasant and are natural responses when the body turns off the stress response and restores balance to the body systems. This means you are doing the exercises correctly. You are achieving deep relaxation. When you experience these sensations, just go with them and watch what happens. Don't resist them. Your thoughts, when you notice anything unusual, should sound like, "Hmm, that's interesting." Don't add any more thoughts about the sensations. When you do the activity correctly, whatever happens while you are relaxing is entirely right for you. While these sensations may never or rarely happen to you, if they do, allow the feelings to happen freely.

16.6 Use Good Judgment

As always, use your good judgment when starting a new activity. Consult with your physician if you have any concerns or questions about the safety of a technique. For example, pregnant women may want to consult with their healthcare provider before starting yoga. If you have difficulties breathing or a sleep disorder, you may need to alter some techniques.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

Regularly practicing the relaxation techniques in these chapters may reduce or even put an end to poor health conditions associated with stress. Regular practice of relaxation techniques, including meditation, is known to decrease high blood pressure,[5] cardiovascular disease,[6] and other chronic diseases.[7] As a result, some people may take more medication than is necessary as their stress-related conditions diminish. Therefore, you should consult with your healthcare provider from time to time to determine the right amounts of medication as your stress-related symptoms decrease.

Stress Relief Audio Files

ACTIVITY *Want to listen? This asset is only available to your instructor at the moment. Please reach out to them for file access!*

16.7 Time for a Nap—A Power Nap

The first relaxation technique we will introduce is the **Power Nap.** It combines elements of several relaxation exercises, including deep breathing, mindfulness, and yoga, to relax and rejuvenate body and mind. It is not a "nap" in the traditional sense of the word, but a specific technique to bring physical and mental relaxation. Power Nap is an appropriate name for this relaxation technique, because it is immediately powerful in restoring balance and homeostasis.

Benefits and Background

The benefits of this relaxation technique include an immediate increase in energy, an increase in ability to focus, and a general feeling of rejuvenation. If you do the Power Nap just before bedtime, it can result in falling asleep quickly and staying asleep throughout the night in profoundly restful sleep. The Power Nap also produces the opposite effect of increasing energy and vitality if you do it and then return to daily activities.

How the Power Nap Works for Relaxation

The Power Nap works partly because of the position of the body during the exercise. When you do the Power Nap, you place yourself into a position that immediately relaxes the upper and lower back and shoulders, along with the neck, jaw, eyes, and other facial muscles. Another benefit of this position is that it redistributes the flow of blood to the upper parts of the body, so oxygen and essential nutrients get to the brain quickly. By contrast, standing or sitting in an upright position all day causes blood to pool, because of gravity, in the lower parts of the torso and legs. The Power Nap helps to balance this out.

16.8 Doing the Power Nap

The Power Nap is simple to do. All you need is a soft floor, a chair, a couch, or a bed, and some privacy so you will not be interrupted. Figure 16.1 shows the body position for the Power Nap.

These 10 simple steps will guide you through the Power Nap:

1. Lie on the floor and place your body so that your thighs are in a vertical position, your knees at a 90-degree angle, and your calves are horizontal and resting on a chair or bed.
2. Close your eyes and begin by extending your arms up over your head, reaching as high as you can. Extend your arms as long and straight as possible, feeling the comfortable stretch in your back as you do this. With your arms straight, let the backs of your hands touch the floor above your head. After several deep, full breaths, place your hands on your abdomen with your elbows touching the floor.
3. Notice the up-and-down movement of your abdomen as you breathe in and out. To enhance this focus, place 1 hand on your chest while keeping the other hand on your stomach. For a few minutes, focus directly on your breath. When you inhale, only your abdomen hand should be moving. Try to make your chest hand remain completely still as you inhale. Make a special effort to focus on breathing with your abdomen and not your chest.
4. After a few minutes of concentrating on your breathing and feeling yourself getting into the rhythm of this deeper, slower breathing, experiment with your hands to see where they feel most comfortable. You may either keep both hands on your abdomen or let them drop off to your sides. You may prefer having your palms up or palms down. Find the most comfortable position for you.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

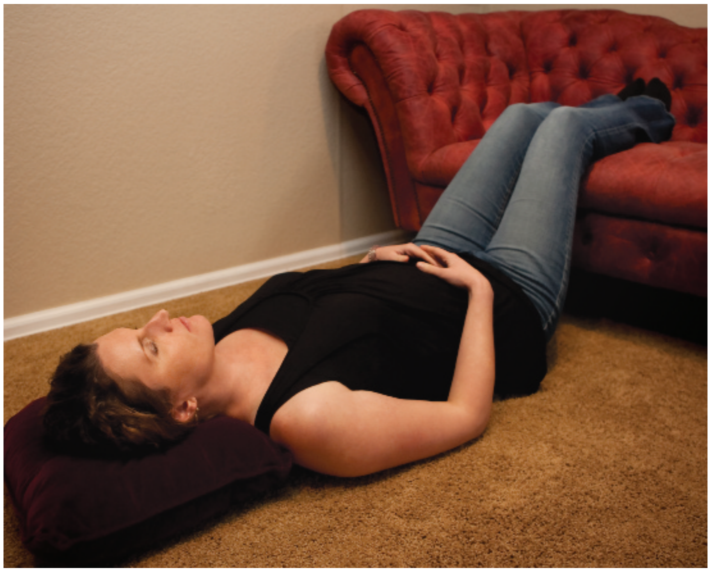

Jennifer Evans/Candy Apple Photography

FIGURE 16.1
The Power Nap
Power Nap is an appropriate name for this relaxation technique because it quickly restores balance.

5. As you continue breathing slowly and deeply, bring your attention to your shoulders. Allow your shoulders to release into the floor. Turn off all tension by consciously releasing and letting go of any need to keep the muscles in your shoulders in a tightened state. Keep your shoulders wide and open; do not pinch your shoulder blades together. Visualize your shoulders like butter melting into the floor. Each time you exhale, allow your shoulders to feel a little more relaxed, a little looser, a little limper.
6. Return your attention to your breathing and notice how your breath has become even slower and more effortless. Next, bring attention to your face. Move through each set of muscles from your jaw through the middle of your face, your eyes, and into your forehead, and consciously relax all those muscles. Consciously feel all your facial muscles release and let go.
7. Return to your breathing. Focus on deep, effortless breathing once again. If your mind wanders to other things, gently return it to your breath.
8. After about 10 or 15 minutes of this exercise, slowly begin to return to ordinary consciousness. Begin to return to full alertness by moving your hands and fingers. Next, move your arms and neck as if you are looking from side to side around the room. Take your time and don't be in a hurry to return to sitting or standing. If you do this too quickly, you may become dizzy or feel sluggish after finishing.
9. Carefully lift your feet off the chair, bring your knees to your chest, and then roll to one side, so you are lying in the fetal position. Spend a moment or two in this position.
10. Then, when you feel ready, bring yourself up into a seated position while still on the floor. After about a minute, you will be prepared to return to daily activities with renewed energy and vitality.

Adding the Power Nap to Your Daily Routine

There are two "best times" during the day to do the Power Nap:

1. Late afternoon after your day's activities and before evening activities.
2. Just before falling asleep:

- Complete your usual bedtime routine.
- Make the Power Nap the last thing that you do before your head hits the pillow, and you close your eyes.
- Once you have finished this relaxation exercise, slip into bed, and easily fall asleep.

STRESS STORIES

Simple and Powerful

Don't underestimate the Power Nap. People who try this in my classes and seminars are amazed at its effectiveness, and they use it often. It is usually one of the first relaxation techniques I introduce in my class, and students typically report that they haven't felt so good in a long time—even after practicing the Power Nap just one time.

After practicing every one of the relaxation exercises in this book for many years, I find that most of them work well. Few, however, are as powerful at restoring energy and ending fatigue as the Power Nap. It has been a part of my regular daily activities for more than three decades. Simply—it works!

—MO

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

16.9 Conclusion

Relaxation is the movement of the mind/body from the stress response to the relaxation response. The purpose of relaxation techniques is to activate the calming parasympathetic nervous system activity directly. Once the body has transitioned from fight-or-flight to rest-and-repair, it goes back to work, fixing many of the health problems that were the result of chronic stress.

The Power Nap is a simple yet powerful technique to activate the relaxation response. It combines elements of deep breathing, mindfulness, and yoga. In the chapters in Part IV, you will learn several additional ways to activate the relaxation response. These strategies range from simple breathing techniques to yoga and meditation. Some methods focus to a greater extent on quieting the mind, while others focus more on physically relaxing the body. You will have the opportunity to experience each and determine which ones to incorporate into your life. Every time you do a relaxation technique, think of it as taking a minivacation from stress.

Stress Relief Audio Files

ACTIVITIES *Want to listen? This asset is only available to your instructor at the moment. Please reach out to them for file access!*

ACTIVITY

16.1 The Power Nap

Purpose To allow you to practice deep relaxation.

Directions Prepare your environment for relaxation. Follow along with the instructions for the Power Nap Stress Relief Audio File found in the CengageBrain website audio files. Practice this technique at least 2 times according to the instructions on the audio file. At least once, do it immediately before you sleep at night. Make sure it is the last thing you do before sleep. Do it at times when you will not be disturbed. Allow approximately 15 minutes to complete the exercise.

After completing Power Nap, respond to the following questions.

Afternoon:

1. How did you feel before the exercise?
2. What was your experience during the exercise?
3. How did you feel immediately after the exercise?
4. How did you feel several hours after completing the exercise?

Right before sleeping at night:

1. How did you feel before the exercise?
2. How quickly did you fall asleep?
3. How did you sleep, and how refreshed did you feel when you awakened the following morning?
4. How did this differ from a typical night's sleep?

Classroom experience (if applicable):

1. How did you feel before the exercise?
2. What was your experience during the exercise?
3. How did you feel immediately after the exercise?
4. How did you feel several hours after completing the exercise?

Summary After you have practiced the exercise and described your experiences, include a brief review of what you liked and did not like about this technique. Compare this technique to some of the others you have practiced. Would this be a relaxation technique you would consider regularly using for stress management? Why or why not?

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

Key Points

- Whereas cognitive techniques help stop the stress response from activating, physical techniques help to reduce stress.
- The purpose of relaxation techniques is to activate the parasympathetic nervous system.
- The Power Nap is a simple yet powerful technique for relaxation.

Key Terms

relaxation

passive alertness

Power Nap

References

1. *Mind/Body Health* (5th ed.), by K. Karren, N. Lee Smith, & K. Gordon (Glenview, IL: Pearson, 2014).
2. "Relaxation," *in Oxford Dictionary* (11th ed.), (2011).
3. *The Relaxation Response,* by H. Benson (New York: Avon Books, 1975).
4. "Relaxation Techniques: Try These Steps to Reduce Stress," by Mayo Clinic staff, retrieved March 16, 2014, from http://www.mayoclinic.org/healthy-living/stress-management/in-depth/relaxation-technique/art-20045368.
5. "Current Perspectives on the Use of Meditation to Reduce Blood Pressure," by C. M. Goldstein, R. Josephson, S. Xie, & J. W. Hughes, *International Journal of Hypertension,* (2012): 578397.
6. "Meditation and Cardiovascular Risk Reduction: A Scientific Statement from the American Heart Association," by G. N. Levine, R. A. Lange, & C. N. Bairey-Merz et al., *Journal of the American Heart Association, 15*(10) (2017): 6:e002218.
7. "Meditation Interventions for Chronic Disease Populations: A Systematic Review," by R. Chan & J. L. Larson, *Journal of Holistic Nursing, 33*(4) (2015).

Take a Breath

Photodisc/Getty Images

All things share the same breath—the beast, the tree, the man . . . the air shares its spirit with all the life it supports.

—*Chief Seattle*

I have heard that deep breathing is one of the best ways to relax. How does this work?

Is abdominal breathing more effective for relaxation than chest breathing?

Learning Objectives

Study of this chapter will enable you to do the following:

17.1 Explain the benefits of breathing for relaxation.

17.2 Differentiate between several breathing techniques to facilitate relaxation.

17.3 Experience the benefits of breathing for relaxation.

17.4 Determine the breathing techniques that are most effective for you.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

Real People, Real Stories

Breathing Works The Relaxing Breathing exercise was extremely relaxing and relieving. I felt both exhilarated and relaxed at the same time. Before the exercise, I felt tired from a long day, yet ready for another relaxation technique. It was amazing how easily I was able to feel the energy come into my body from simple, deep breathing. I noticed how my breath got deeper and more relaxed with each count down to zero. It was so awesome! Immediately afterward, I went to bed and slept well all night. I was up late that night, yet I woke up feeling great. It was a powerful technique.

When I did the exercise the second time, it felt as though my breaths got even deeper and more relaxed. I found that I was able to concentrate on one thing entirely. Because I was able to fully focus on the air going in and out of my lungs, the second time was more natural. Before the exercise, I was irritable and tired but didn't want to practice a relaxation technique. I did it anyway, and I was glad I did! Afterward, I felt energized and happier. About an hour later I still felt good. Things didn't bother me as much as they had earlier in the day.

—Chad R.

17.1 Take a Breath

The rhythm of the breath continues from our first moments of life to our last. Although we take breathing for granted, breath is life! Breathing is a crucial point of contact between mind and body, as respiration occupies a unique interaction between the voluntary and involuntary nervous systems. Shallow, irregular breathing reinforces stress and can have harmful physical consequences. Deep breathing, however, induces relaxation, enhances emotional states, and increases sustained attention.[1]

Adults normally breathe at the rate of 12 to 16 breaths per minute, and inhale an average of 16,000 quarts of air each day. When nothing is done to restrict breathing, it happens naturally and fully. Yet, in our stress-filled lives, we disrupt our natural breathing patterns. Conscious, relaxing breathing relieves stress, allowing a return to natural, uninhibited breathing.

17.2 Background

For centuries, breathing methods have been an intrinsic part of mental, physical, and spiritual development in Asia and India. Deep breathing continues to be an essential component of ancient Eastern practices such as yoga and tai chi. Breathing techniques are part of an approach to mind-body well-being that emphasizes balance and wholeness.

Breathwork is a term used to describe a variety of stand-alone breathing techniques, as well as breathing techniques that are integral to other mind-body practices like yoga, tai chi, and qigong. According to the University of Minnesota Center for Spirituality and Healing, many breathwork techniques are particularly useful because you can do them anywhere, anytime. Focusing attention on the breath also serves the meditative function of allowing the mind to release distressing thoughts and emotions more easily.

17.3 How Breathing Works

You don't even need to think about breathing—your body does it for you. Breathing is controlled by your brain as part of your autonomic nervous system, just like your heartbeat or perspiration—it's automatic. But unlike your heartbeat, you can take control of your breathing, making it voluntary. Once you do, a variety of breathing patterns can be deliberately applied to bring about an array of physiological and psychological benefits.

The primary purpose of breathing is to supply the body with oxygen and remove excess carbon dioxide. The body's ability to produce energy and complete the various metabolic processes depends upon enough and efficient use of oxygen. Oxygen is necessary to help us repair and regenerate our bodies. An average human breath holds about 10 sextillion

(10^{22}) atoms.[2] If any tissues in the body, including the heart and the brain, are deprived of oxygen for more than a few minutes, severe damages can result.

The 2 patterns of breathing are:

1. **Abdominal breathing,** also called **diaphragmatic breathing** or **belly breathing.**
2. **Chest breathing,** also called **thoracic breathing.**

Normal breathing often combines both of these. Chest breathing is relatively shallow. The chest expands, and the shoulders rise as the lungs take in air. Abdominal breathing is deeper. Jon Kabat-Zinn gives us some information about the anatomy and physiology of breathing:

> The **diaphragm** is a large, umbrella-shaped sheet of muscle that is attached all around the lower edges of the rib cage. It separates the contents of the chest (the heart, lungs, and great blood vessels) from the contents of the abdomen (the stomach, liver, and intestines). When it contracts, it tightens and draws downward because it is anchored all along the rim of the rib cage. This downward movement increases the volume of the chest cavity, in which the lungs are located on either side of the heart. The increased volume in the chest produces a decrease in the air pressure in the lungs. Because of the decreased pressure inside the lungs, air from outside the body, which is at a higher pressure, flows into the lungs to equalize the pressure. This is the **inbreath.**
>
> After the diaphragm contracts, it goes through a relaxation, loosening and returning to its original position higher up in the chest, thereby decreasing the volume of the chest cavity. This increases the pressure in the chest, which forces the air in the lungs out through the nose (and mouth if it is open). This is the **outbreath.** So, in all breathing, air is drawn into the lungs as the diaphragm contracts and lowers, and it is expelled as the diaphragm relaxes and rises.
>
> Now suppose the muscles that form the wall of your belly (the abdomen) are tight rather than relaxed when the diaphragm is contracting. As the diaphragm pushes down on the stomach, the liver, and the other abdominal organs, it will meet resistance and be unable to descend very far. Your breathing will tend to be shallow and high up in the chest.
>
> In abdominal or diaphragmatic breathing, the idea is to relax your belly as much as you can. Then, as the breath comes in, the belly expands slightly (on its own) in an outward direction as the diaphragm pushes down on the contents of the abdomen from above.[3]

In summary, abdominal breathing involves inhalations that cause the diaphragm to contract and drop, drawing air into the lungs. When air moves down into the lower parts of the lungs, the abdomen expands slightly. On exhalation, the diaphragm relaxes and moves upward, and the stomach moves back in.

Evidence of activation of the fight-or-flight response shows in our breathing patterns. Thoracic or chest breathing, unconsciously holding the breath, or exhaling incompletely are indicators that we are in the stress response.[4] People who have chronic stress tend to breathe either with their chest almost exclusively, or with their abdomen and chest simultaneously.

When breathing is restricted, cells throughout the body do not receive an adequate supply of oxygen. When this happens, symptoms include drowsiness, irritability, and headache. One reason exercise is so beneficial is that it forces you to breathe deeply and fully, thereby replenishing your supply of oxygen.

People who breathe primarily from the chest move less oxygen per breath into the body than those who breathe abdominally.[5] The exchange of oxygen from the lungs into the bloodstream is far more significant in the lower portion of the lungs when a person is in an

FYI

Seven Signs You Aren't Breathing Naturally

- Inhaling with your chest. If you notice that the first thing to move when you take a breath is your chest, this is a sign your breathing is shallow, or you are breathing from your upper chest.
- Your trunk doesn't widen. Place your hands on the sides of your ribcage and take note. Your hands should move to the side about 1.5 to 2 inches as your trunk expands.
- Mouth breathing. Unless you have congestion or a sinus infection, you should breathe through your nose. Breathing through your nose releases nitric oxide to be carried to your lungs to maintain homeostasis in your body.
- Tight shoulders and upper neck/chest muscles. Tension in these areas can be a sign of shallow or stressed breathing.
- Frequent yawning. Frequent sighing and yawning are signs your body is not receiving enough oxygen.
- High resting breath rate. Take a moment to see how many times you breathe in 1 minute. A reasonable resting breath rate should be 10 to 12 breaths per minute. A resting breath rate over 12 is a sign of too fast or shallow breathing.
- Slouching. If you find yourself slouching your head or shoulders forward, often it can be a sign that you are not activating your diaphragm when you breathe.

Source: *"The Best Ways to Lower Stress & Cortisol: Tips," Kion, retrieved from https://getkion.com/articles/mind/stress/breathe/.*

CULTURE CONNECTION Breath of Life

For centuries, breathing exercises have been used as a legitimate treatment in the healing modalities of health practitioners around the world. **Pranayama,** or the control of breath, comes from the Sanskrit *prana*, or life energy, and *ayam*, or control. As the life force, *prana* is equivalent to such concepts as *qi* or *chi* in traditional Chinese medicine, or vital force in homeopathy. Yoga teaches that interruption of the flow of *prana* by such factors as stress, toxins, or improper diet can affect physical, mental, and spiritual health. Pranayama breathing exercises are intended to remove such blockages. Pranayama exercises often emphasize slow, deep abdominal breathing.

Source: *The Best Alternative Medicine: What Works? What Does Not?* K. Pelletier (New York: Simon & Schuster, 2000).

upright position and is breathing abdominally.[6] Breathing abdominally helps bring air into the lower lobes of the lungs, resulting in an increase in beneficial oxygenation throughout the various cells and systems of the body.

A young baby at rest breathes abdominally. The abdomen moves in and out; the chest doesn't move at all. We are born as abdominal breathers. It is our natural way of breathing.

Nicholas Moore/Shutterstock.com

Take a breath—deep breathing can make computer time less stressful.

17.4 Benefits of Relaxing Breathing

Because stress and anxiety lead to many problems in society, researchers are examining ways to deal with these problems effectively. Research on stress-reduction programs, however, sometimes overlooks the body's natural coping and defense mechanisms. The natural breathing process shows great promise as a coping technique for common anxiety and stress. Breathing techniques allow the mind and body time to slow down, energize, and develop harmony and tranquility.[7]

Deep, meditative breathing can have a significant effect on your physical and mental state. How we breathe both reflects the state of the nervous system and influences the state of the nervous system.

Slow, rhythmic breathing can turn an anxious mental state into a state of relative tranquility and release the body from many other adverse effects of stress. Adjusting our breath back to its natural way of deep, slow breathing sends an instant message to the autonomic nervous system that there is no threat, and the body can return to homeostasis. Breathing techniques promote relaxation and activate the calming parasympathetic branch of the autonomic nervous system. [8]

Practicing proper breathing techniques is one of the most vital healing techniques we have at our disposal, as a treatment for respiratory disease and also to reduce the anxiety associated with psychosomatic illness. Breathing slowly or regularly, or sitting in an upright posture, helps to decelerate the heart rate, whereas slouching or breathing shallowly and quickly tends to accelerate it.[9]

When the body returns to a more balanced state, it can cure maladies associated with stress. Studies have shown that deep abdominal breathing is effective in reducing levels of stress and anxiety in people with panic disorders.[10] It can also help people cope with stressful situations including test anxiety,[11] and even reduce blood pressure.[12]

Breathing techniques are useful for a range of stress-producing conditions, from dealing with the pain of childbirth to alleviating hot flashes in menopausal women. Conscious breathing practices are included in childbirth preparation classes. Anxiety intensifies pain; breathing consciously helps to relieve anxiety and reduce pain.[13]

> Feelings come and go like clouds in a windy sky. Conscious breathing is my anchor.
>
> —*Thích Nhât Hanh*

Hot flashes are the most common symptom women experience during menopause. Of the 2,500 participants in the Massachusetts Women's Health Study, 75% reported having hot flashes during menopause.[14] Research shows that breathing exercises can help relieve hot flashes—no small benefit to the masses of Baby Boomers entering menopause. Researcher Robert Freedman of Wayne State University reports in the *American Journal of Obstetrics and Gynecology*, "In three of our studies, slow, controlled deep breathing cut the frequency of hot flashes by about half." In his most recent trial, 24 women suffering at least 5 hot flashes a day were randomly assigned to practice either paced breathing or brainwave biofeedback. The number of hot flashes fell by half in the breathing group, but didn't budge in those doing biofeedback.[14] Deep natural breathing provides positive benefits for both the body and the mind.

STRESS STUDIES

Using Breathing Techniques to Ease Test Anxiety

A study involving university students compared mindful breathing, cognitive reappraisal, and a control group to see if there would be any differences in test anxiety between each of the groups. The results showed that both mindful breathing and cognitive reappraisal yielded a significant reduction in test anxiety. Additionally, the mindful breathing group scored higher on positive thoughts than the cognitive reappraisal and the control groups.

By mastering breathing techniques, students can control the effects of situational anxiety and thereby achieve a heightened state of awareness, feel calmer, increase their concentration, and become less easily distracted. These benefits from controlled natural breathing allow for optimal performance and maximal achievement on tests and enhance the overall quality of life.

Breathing techniques are used ideally before and during tests to clear the mind, relax the body, and keep the body's mind-body balance. During test breaks, students can use simple breathing techniques to relax while energizing themselves for the next part of the test. Once students have learned these methods, they can implement them whenever and wherever they meet stressful situations.

Source: *"The Effectiveness of Daily Mindful Breathing Practices on Test Anxiety of Students," by H. Cho, S. Ryu, J. Noh, & J. Lee,* PLoS ONE 11(10) (2016).

17.5 Breathing and Relaxation

In Chapter 2, you assessed your breathing to see how many breaths you take in a minute. You also determined whether you breathe more from your abdomen or your chest. Refer to those two assessments. Among the wide variety of factors that affect respiratory rate—activity levels, anxiety levels, and disease states—your respiratory rate at rest can be a good indicator of your state of relaxation.

Chest breathers with higher respiration rates are more likely to function with the stress response activated. Because the autonomic nervous system triggers the stress response, you may not realize that your breathing pattern has become shallower and quicker. Awareness of your current mode of breathing is an essential first step toward using this powerful tool to activate the parasympathetic nervous system and immediately feel more relaxed.

Nearly every stress-management technique designed to reduce sympathetic nervous activity includes a breathing element. As we will see in upcoming chapters, abdominal breathing is used with progressive muscular relaxation, autogenic training, mental imagery, and yoga. It was also included as an intrinsic part of the Power Nap in Chapter 16.

17.6 How to Do Relaxing Breathing

Breathing techniques require no special equipment. You can do them anytime. They may be done lying down or sitting in a comfortable chair. Although it isn't imperative, try to do them in a place with limited distractions, with your eyes closed, so you can easily stay focused on your breath.

Breathing exercises can be particularly beneficial in the afternoon after a busy day. Relaxing breathing exercises are especially useful in helping you fall asleep. Because some breathing techniques alter brainwave activity and may cause you to feel temporarily drowsy, avoid doing relaxing breathing exercises while driving or operating heavy machinery.

FYI

Don't Stop Breathing!

You probably haven't noticed, but when you stare at your screen, you temporarily stop breathing, or you breathe more shallowly unless you're paying attention. When that happens, the body becomes acidic; the kidneys begin to reabsorb sodium; and the oxygen, carbon dioxide, and nitric oxide balance is undetermined, which throws off our biochemistry. This type of breathing also automatically activates the fight-or-flight response. So pay attention to your breath from time to time so it stays deep and relaxing.

Source: *"Screen Apnea," by L. Stone,* Business Insider, *July 30, 2013, retrieved on December 6, 2019, from https://www.businessinsider.com/screen-apnea-2013-9.*

17.7 Breathing Exercises

Relaxing breathing exercises are probably the most natural type of relaxation techniques to learn. Although there are several variations, they usually involve bringing attention to the inhalation and exhalation of the breath, sometimes holding the breath briefly, or varying the duration of the inhalation or the exhalation.

Experiment with the following breathing exercises. Try them several times to see which ones have the most value for you. Go to the CengageBrain website Stress Relief audio file to find the Relaxing Breathing exercise. Using this exercise on the audio file, you can experience deep relaxation with the help of a guide to take you through the process.

Natural Breathing

Of all the breathing techniques, this is one of the most relaxing. Fortunately, you can do this one just about anywhere. The emphasis of this mode of breathing is mostly on the exhalation.

With your mouth closed, begin by inhaling naturally, but not fully. Inhale to the point where your lungs feel comfortably full. As you exhale, focus on making your exhalation as soft and slow as comfortably possible.

Once you feel your lungs comfortably empty, pause for just a few seconds before you begin your next natural inhalation. Again, don't fill your lungs fully, but inhale only to a comfortably full level. Exhale again as slowly and softly as you possibly can. Remain focused on your breath each time you exhale, so you maintain the softness and the slowness of each exhalation. Continue this for as long as you desire.

Simple Diaphragmatic Breathing

You can immediately strengthen abdominal breathing with this technique. Either sitting, standing, or lying down, place one hand on your stomach, over the navel, and the other on the lower part of your sternum just over the heart. Focus on your breathing pattern. By noticing which hand moves more—the upper or the lower hand—during inhalation and exhalation, you can make adjustments. Gently breathe so the hand over your stomach moves out with the inhalation and in with the exhalation, while your top hand stays still.

Once you have established this mode of deep breathing, repeat "I am" with each inhalation and "relaxed" with each exhalation. Try this:

1. Sit comfortably and quietly.
2. Tell yourself that you are going to use the next 5, 10, or 20 minutes to re-balance, to heal, and to relax.
3. Surrender the weight of your body, allowing the chair or floor to support you.
4. Close your eyes, gently cutting out visual stimulation and distraction.
5. As you inhale, repeat to yourself: "I am."
6. As you exhale, say, "relaxed."
7. Continue to breathe deeply and continue to repeat: "I am" with each inhalation; "relaxed" with each exhalation.
8. As your mind begins to wander, gently bring it back to the awareness of your breath and your statement, "I am—relaxed."
9. Continue doing this for as long as you prefer.
10. To conclude, stop the phrase and slowly stretch your hands and feet, your arms and legs, then your whole body.

Jennifer Evans/Candy Apple Photography

Practice diaphragmatic breathing by placing 1 hand on your chest, the other on your stomach. Breathe so only your stomach hand moves.

Relaxing Breathing

A simple and effective type of focused breathing is called **relaxing breathing.** You may practice relaxing breathing in a seated position or lying down. The beauty of this technique is that you can do it whenever you think of it. It only takes a moment to turn your attention to your breathing and consciously adjust the part of your torso doing the

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

work—the upper chest area or the lower abdominal area. You can experience the benefits any time, any place. You can use relaxing breathing while preparing for an upcoming athletic event, interviewing for a job, preparing to take a test, or waiting to speak in front of a group of people.

1. Begin relaxing breathing by focusing directly on your breath as it goes in and comes back out. This may be done with the eyes open or closed. Don't try to change anything about your breathing initially, simply tune in to the rhythmic in-and-out pattern of your breath.
2. When your mind wanders and distracting thoughts arise, let them pass, and return your focus to your breath. You may want to place your hands on your abdomen to increase your focus on abdominal breathing.
3. After a few minutes of breathing mindfully, change your breathing pattern by allowing your breath to go down as deep as possible into the lowest parts of your lungs. Your abdomen will naturally move outward. Notice your hands, resting on your stomach, move out as you breathe in. Notice your hands move back in as you exhale.
4. To help you keep your focus on this deep, slow breathing, use this counting method. Start counting at twenty (or whatever number you choose) and count backward to zero. When you inhale, silently say "twenty." When you exhale, mentally say the word "relax." Inhale again and say "nineteen." On the next exhalation, say "relax." Continue down this way until you reach zero.
5. If you notice your mind starting to wander—and it will—gently bring yourself back to the counting. Your breathing will naturally become slower and deeper as you do this. You also can consciously make your breath slower and deeper just by focusing on that mode of breathing.

You may increase the effect by taking little breaks between the inhale and exhale. As you inhale, say the word "twenty," then hold your breath for 3 or 4 seconds before you slowly exhale. Once all the air is expelled, pause briefly before your next inhalation.

This technique is especially powerful for alleviating sleeping problems. If you are in bed and notice yourself struggling to drift off, simply focus on your breath and counting down. People who use this method find it almost universally successful at helping them nod off quickly and sleep through the entire night.

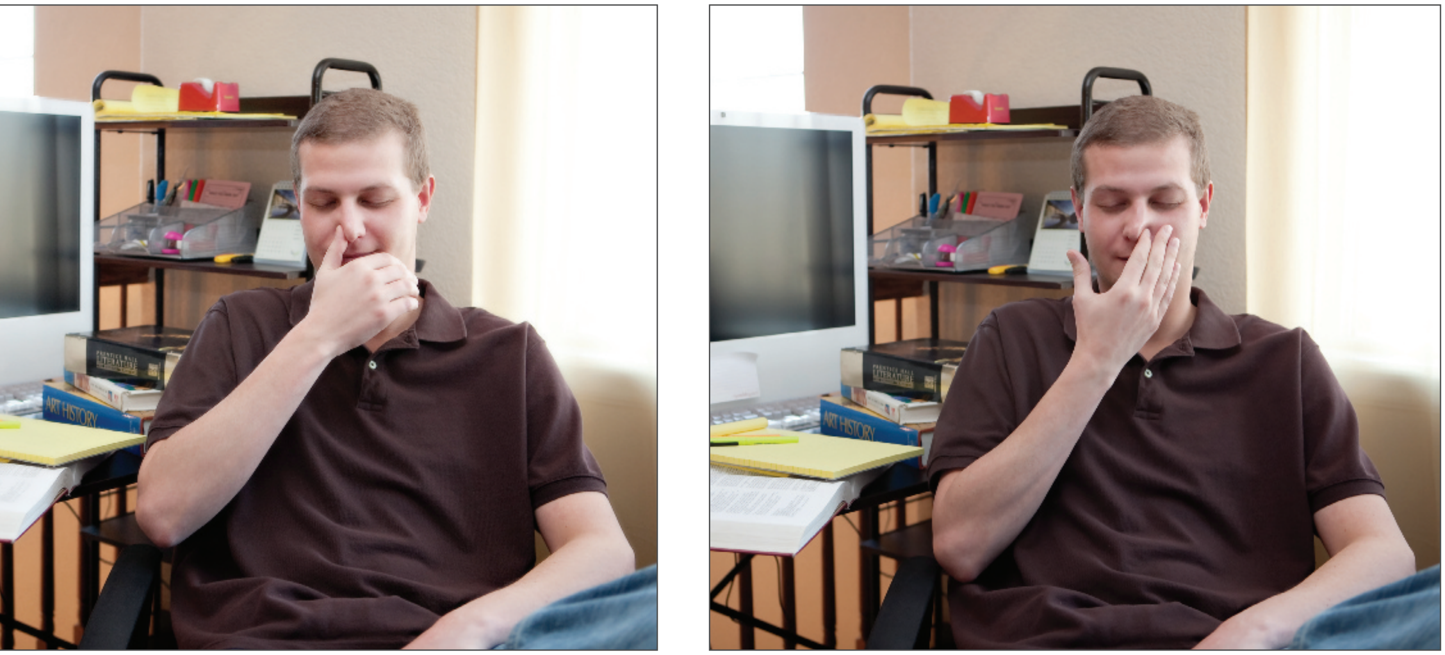
At first, it may feel strange if you are unaccustomed to this mode of breathing, but with regular practice, you will return to this natural way of breathing more and more during the activities of your day. If you tend to breathe quickly, you'll find that you can naturally slow your breathing rate with consistent practice of deep abdominal breathing. The effects of correcting our breathing, and then practicing it, are profound and pleasant.

You'll find a guided version of this exercise at the CengageBrain website. Go to the Stress Relief audio files to find the Relaxing Breathing exercise.

Reduced Respirations Technique

An easy and effective technique for controlling breathing and reducing stress is the **reduced respirations technique,** which works by lowering your breathing rate to as low as 4 to 5 breaths per minute.[7]

1. Take a deep, slow breath, drawing in through the nose and out through the mouth, which should be closed when inhaling. Inhaling and exhaling should take about six seconds each.
2. Place one hand over the diaphragm area of the abdomen and continue drawing long, slow, deep breaths using the same method. Aim to reduce breathing to 6 to 7 breaths per minute. With practice, you may be able to slow your breathing even more comfortably.



Jennifer Evans/Candy Apple Photography

A few minutes of alternating nostril breathing can leave you both relaxed and energized.

3. While you breathe deeply through the nose, the hand should move up and down as the chest wall expands and contracts with lung inflation and deflation. Shoulders should remain stationary.
4. Continue this exercise for several minutes once you have achieved the desired breathing rate.

Alternating Nostril Breathing

Practitioners of meditation often include **alternating nostril breathing** (also known as balanced breathing) to relax the mind and body and to enhance their experience of meditation. Its purpose is to make the respiratory rhythm more regular, which in turn has a soothing effect on the entire nervous system. A few minutes of alternate nostril breathing is profoundly relaxing.[15]

This breathing exercise usually is done while seated or lying down. With the eyes open or closed, you bring one hand up to your face. In this technique, the thumb and forefinger are used to alternate pressing on either side of the nose. The focus is directly on the breath as you alternately exhale and inhale through one nostril, then exhale and inhale through the other nostril.

Beginning with the exhalation, push the thumb against one side of the nose to shut off that nostril as air passes freely through the other. During the following inhalation, continue to hold the nostril closed. On the next exhale, release the thumb and push against the nose with the forefinger on the opposite nostril closing this one off completely. Inhale while holding the same nostril closed. This pattern—switching back and forth from one nostril to the other—can be repeated as long as desired. Remember to place the focus on the breath.

Alternating nostril breathing can be adapted in several ways, including single-sided nostril breathing techniques, which have been part of yoga tradition for generations. Although this is difficult to prove empirically, single-sided nostril breathing may either increase energy (right nostril) or calmness (left nostril).[16]

Right-Nostril Breathing (Energy)

1. Close off the left nostril with the index finger.
2. Inhale slowly and deeply through the right nostril until you feel a sense of fullness in the lungs.

3. Hold the breath for a count of 3 seconds.
4. Exhale slowly and completely through the right nostril.
5. Complete this cycle of breathing 7 to 10 times or until you obtain a sense of being energized.

Left-Nostril Breathing (Calmness)

1. Close off the right nostril with the index finger.
2. Follow the same procedure as for right-nostril breathing, except breathe through the left nostril for a sense of calmness.

If you seek calmness and energy, an alternate nose-breathing technique is a quick, simple, and powerful breathing method that combines the left-nostril and right-nostril breathing techniques. It helps boost energy while keeping a sense of calm.

1. Take a deep breath through the right nostril while closing the left nostril with the left index finger.
2. Hold your breath for a count of 3, then release the left nostril, close the right nostril, and exhale. Then inhale through the same nostril and hold your breath.
3. Releasing the right index finger, press against the left nostril with the left index finger again and exhale from the right nostril. This is considered one breath count.
4. Continue the above steps for 7 to 10 breaths, or until you achieve a sense of calmed energy.

In his book *Conscious Breathing,* Gay Hendricks advocates this technique to help refresh and energize the body; clear, calm, and focus the mind; and improve a tired or scattered mood.[17] Experiment with the various alternating nostril breathing techniques to determine what works best for you.

Full Breathing

Full breathing involves breathing in first to the abdomen, then slowly filling the lungs as you inhale. After holding your breath for a few moments, exhale by first releasing the air from the tops of the lungs, then slowly move down to the lower parts of the lungs, so the abdomen moves back in at the end of the exhale.

Visualization Breathing

While lying on your back, and with your eyes closed, place your hands over your stomach, just below your ribs. **Visualization breathing** combines full breathing with visualization. Practice full breathing for a few moments. As you inhale, visualize the inbreath moving down from your nose to the deepest parts of your lungs. If it helps to visualize it more clearly, imagine that your breath is brightly colored. After a full inhale, hold the breath briefly and visualize it becoming energized in the lower parts of your lungs. As you begin slowly exhaling, imagine this energized air spreading to all parts of your body, bringing with it healing energy and purified oxygen. On the next inhalation, repeat this process. Continue breathing fully and imagine the energizing breaths spreading throughout your body for several minutes.

Command Breathing

Tom Brown, a teacher of Native American spirituality, describes using what he calls the "command breath" to help bring the mind to a state of "sacred silence." **Command breathing** can be done by oneself or with the help of a guide. Tom Brown suggests the following:

> This sequence begins with the guide telling the meditator to take a deep breath, hold it for a few moments, then at the command of the guide, releasing it completely. The guide tells the meditator that the next time the command breath is taken, he should focus all distraction, tension, and discomfort into that breath and let it all go with the exhalation. Let everything flow out with the air leaving the lungs. Now repeat the command breathing process about two to four times. Each time the meditator should imagine and believe that all distraction is passed out of the body and mind with each exhalation.[18]

Pelvic Tilt with Diaphragmatic Breathing

If you find it challenging to concentrate on breathing alone, this might be the best breathing technique for you. Coordinating the gentle, rocking, spinal movement and pelvic tilt with your breathing is a real winner. Here is how yoga master Ravi Dykema describes the technique: [19]

1. Start in the relaxation pose, resting on your back with arms comfortably at your side. Take a few deep, relaxing breaths.
2. As you exhale, rock your pelvis so that the waistline part of your back drops toward the floor. Your lower back may even touch the floor as you complete your exhalation.
3. As you inhale, let your pelvis rock back to where it came from, and your lower back will arch slightly upward, to its previous position.
4. Don't press into the floor with your feet to rock your pelvis. Let your legs rest, your feet relaxing into the floor. The muscle activity that creates this movement is only in your abdomen. Your back, buttocks, and legs stay relaxed.
5. Continue this breath/movement, tipping your pelvis as you exhale so your lower back descends toward the floor and releasing this effort as you inhale so your pelvis returns to its "neutral" position, as does your back.
6. Your belly will puff out with each inhalation and drop toward the floor with each exhalation.
7. Continue for 5 to 10 minutes. When your mind wanders to a thought, just bring it back to what you are doing.
8. To finish, end the control of your breath and return to autonomic, effortless breathing, noticing how this transition feels. After a minute, stretch as you take some deep breaths, then roll onto your side to sit up.

Breathing While Stretching

This breathing while stretching technique targets whole-body tension, diverting attention from stress-related body sensations to feelings of relaxation and calmness.

1. Stand or sit in a chair with your back straight.
2. Mentally scan your body for tension and rate yourself on a 1 to 10 scale for anxiety.
3. Raise your arms until they are directly overhead. Clasp your hands together and stretch toward the ceiling. While raising your hands upward, inhale slowly and deeply through the nose, with lungs full when the hands reach their apex. Hold your breath for 3 to 5 seconds while stretching upward.
4. Slowly exhale through the nose while lowering the hands back to your sides.
5. Intertwine the fingers of both hands, and with palms facing outward push away from the chest, arms parallel to the floor. While pushing away, take a deep breath. When the arms reach maximum extension, push away from them, stretching the back and arms, holding the breath for 3 to 5 seconds.
6. Return the arms slowly to their resting position while exhaling slowly.
7. Repeat this exercise three to five times. Rate your body sensations and feelings of anxiety on a 1 to 10 scale.
8. Repeat as necessary.[7]

17.8 Conclusion

Conscious breathing is an element of nearly every relaxation technique. Used alone or in combination with other methods, the beneficial results are immediately noticeable. More than anything else, the purpose of focusing on breathing is to consciously return to a natural rhythm of deep, slow, effortless inhaling and exhaling. As we do this, the stress response automatically turns off.

Try any of the breathing techniques for several days and in a variety of situations to determine the methods that work best for you. Breathing—one of the most ordinary and natural processes—may turn out to be one of the most effective strategies for you to reduce stress and enhance your sense of calmness and well-being.

Stress Relief Audio Files

ACTIVITIES *Want to listen? This asset is only available to your instructor at the moment. Please reach out to them for file access!*

ACTIVITY

17.1 Relaxing Breathing

Purpose To allow you to practice deep relaxation using relaxing breathing.

Directions Prepare your environment for relaxation. Follow along with the instructions for the Relaxing Breathing Stress Relief Activity found in the CengageBrain website audio files. Practice this technique at least twice according to the instructions on the audio file. At least once, do it immediately before you sleep at night. Make sure it is the last thing you do before sleep. Do it at times when you will not be disturbed. Allow approximately 15 minutes to complete the exercise.

After completing Relaxing Breathing, respond to the following questions. Describe how you felt in relation to your stress levels.

Afternoon:

1. How did you feel before the exercise?
2. What was your experience during the exercise?
3. How did you feel immediately after the exercise?
4. How did you feel several hours after completing the exercise?

Right before sleeping at night:

1. How did you feel before the exercise?
2. How quickly did you fall asleep?
3. How did you sleep, and how refreshed did you feel when you awakened the following morning?
4. How did this differ from a typical night's sleep?

Classroom experience (if applicable):

1. How did you feel before the exercise?
2. What was your experience during the exercise?
3. How did you feel immediately after the exercise?
4. How did you feel several hours after completing the exercise?

Summary: After you have practiced the exercise and described your experiences, include a brief review of what you liked and/or did not like about this technique. Compare this technique to some of the others you have practiced. Would this be a relaxation technique you would consider using on a regular basis for stress management? Why or why not?

Key Points

- Breathing is a critical point of contact between mind and body, because respiration links the voluntary and involuntary nervous systems.
- Shallow, irregular breathing reinforces stress and can have harmful physical consequences, while deep breathing promotes relaxation and promotes circulation.
- The 2 primary ways of breathing are abdominal (or diaphragmatic) breathing and chest (or thoracic) breathing.
- Thoracic breathing is often a signal that the fight-or-flight response is activated.
- Focused breathing is an element of most relaxation techniques.

- Among the many breathing exercises to help relaxation are simple diaphragmatic breathing, restful breathing, the reduced respirations technique, alternating nostril breathing, full breathing, visualization breathing, command breathing, pelvic tilt with diaphragmatic breathing, and breathing while stretching.

Key Terms

breathwork
abdominal breathing/diaphragmatic breathing/belly breathing
chest breathing/thoracic breathing
diaphragm
inbreath
outbreath
pranayama
simple diaphragmatic breathing
relaxing breathing
reduced respirations technique
alternating nostril breathing
full breathing
visualization breathing
command breathing

References

1. ‘The Effect of Diaphragmatic Breathing on Attention, Negative Affect and Stress in Healthy Adults,” by X. Ma, Z. Q. Yue, Z. Q. Gong, et al., *Frontiers in Psychology, 8* (2017): 874.
2. *The Seven Mysteries of Life,* by G. Murchie (Boston: Houghton Mifflin, 1978).
3. *Full Catastrophe Living*, by J. Kabat-Zinn (New York: Dell Publishing, 1990).
4. *Your Maximum Mind*, by H. Benson (New York: Times Books/Random House, 1987).
5. “Quantification of the Thorax-to-Abdomen Breathing Ratio for Breathing Motion Modeling,” by B. M. White, T. Zhao, J. Lamb, J. D. Bradley, & D. A. Low, *Medical Physics, 40*(6) (2013): 063502.
6. “Yoga-Based Therapy,” by C. Patel, in P. M. Lehrer and R. L. Woolfolk (Eds.), *Principles and Practice of Stress Management* (2nd ed.) (New York: Guilford Press, 1993).
7. “Using Breathing Techniques to Ease Test Anxiety,” by L. Wilkinson, W. Buboltz, & E. Seemann, *Guidance and Counseling, 16*(3) (2001): 76–81.
8. “How Breath-Control Can Change Your Life: A Systematic Review on Psycho-Physiological Correlates of Slow Breathing,” by A. Zaccaro, A. Piarulli, M. Laurino, et al., *Frontiers in Human Neuroscience, 12* (2018): 353.
9. “The Physiological Effects of Slow Breathing in the Healthy Human,” by M. A. Russo, D. M. Santarelli, & D. O’Rourke, *Breathe, 13*(4) (2017): 298–309.
10. “Breathing Exercise – A Commanding Tool for Self-help Management during Panic Attacks,” by M. Haque, *Research Journal of Pharmacy and Technology 10*(12) (2018): 4471.
11. “The Effectiveness of Daily Mindful Breathing Practices on Test Anxiety of Students,” by H. Cho, S. Ryu, J. Noh, & J. Lee, *PLoS ONE 11*(10) (2016).
12. “Effect of Respiratory Pattern on Automated Clinical Blood Pressure Measurement: An Observational Study with Normotensive Subjects,” by N. Herakova, N. Nwobodo, Y. Wang, F. Chen, & D. Zheng, *Clinical Hypertension 23*(1) (2017): 1–7.
13. “The Effect of Deep and Slow Breathing on Pain Perception, Autonomic Activity, and Mood Processing—An Experimental Study,” by V. Busch, W. Magerl, U. Kern, J. Haas, G. Hajak, & P. Eichhammer, *Pain Medicine, 13*(2) (2012): 215–228.
14. “Managing Menopause,” by D. Schardt, *Nutrition Action Healthletter,* July/August 2004, pp. 8–10.
15. “Assessment of the Effects of Prnayama/Alternate Nostril Breathing on the Parasympathetic Nervous System in Young Adults,” by A. N. Sinha, D. Deepak, & V. S. Gusain, *Journal of Clinical and Diagnostic Research 7*(5) (2013): 821–823.
16. *Perfect Health: The Complete Mind/Body Guide,* by D. Chopra (New York: Harmony Books, 1990).
17. *Conscious Breathing: Breathwork for Health, Stress Release and Personal Mastery,* by G. Hendricks (New York: Bantam Books, 1995).
18. *Awakening Spirits,* by T. Brown (New York: The Berkley Publishing Group, 1994).
19. *Yoga for Fitness and Wellness* (2nd ed.), by R. Dykema (Belmont, CA: Cengage Learning, 2012).

chapter

18

Autogenics

Pressmaster/Shutterstock.com

Everything should be made as simple as possible, but not simpler.

—*Albert Einstein*

I've never heard of autogenics. What is it, and how does it work?

Can anyone experience the benefits of relaxation from autogenics if they try hard enough?

Why do my arms and legs feel warm and heavy when I do autogenics?

Learning Objectives

Study of this chapter will enable you to do the following:

18.1 Describe how autogenics works for relaxation.

18.2 Explain the health-related benefits of autogenics.

18.3 Experience the benefits of autogenics.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

Real People, Real Stories

Students Experience Autogenics This first time I tried the autogenics exercise, I thought it was going to be a waste of time because of how I was feeling. I was totally awake and didn't think I'd be able to do it. But, to my surprise, this exercise gave me the deepest relaxation I think I've ever experienced, and I wanted to go to sleep. My body felt warm, heavy, and relaxed. Just an hour later, I felt completely rejuvenated.

—Jeff D.

***

Total relaxation is what I could call autogenics. I first did this at the end of the day with a roommate. Talk about melting into the floor! At first, I had a hard time concentrating on feeling heavy. But it worked, and man did my body ever feel good after we were finished! The second time I did it right before bed and had an even better experience. I was able to concentrate more and get more of the effect I think I was supposed to have. Once I was finished and in bed, my body didn't want to move. It still felt heavy but so relaxed that I probably stayed in the same position all night long. I really enjoyed this technique.

—Lindsay J.

***

This relaxation exercise has been my favorite so far. Before the autogenics exercise, I felt normal—not tired or very stressed. During the exercise, I relaxed quickly, and my body went limp. I was so relaxed that I fell asleep. I woke up feeling like I was on top of the world. The second time I did the exercise, the same thing happened. I fell asleep again, but it was short and wonderful! I feel so good after I do that exercise. For the rest of the day, it seemed like I could do anything. I had so much energy!

—Jennifer M.

18.1 Autogenics

The word *autogenic* comes from the Greek words *autos*, meaning self, and *genos*, meaning origin. Hence, **autogenics** is self-directed relaxation using suggestions to create feelings such as warmth and heaviness in the body.

The Power of Suggestion

Autogenics is like hypnosis, in that both involve the use of suggestion. In hypnosis, a **suggestion** is any statement that the mind believes is true, accurate, or real. In autogenics, the suggestion is self-directed. We will explore hypnosis more thoroughly in Chapter 20. For now, we want to address the power of suggestion and how it relates to the relaxation technique called autogenics, or autogenic training.

18.2 Background of Autogenic Training

Autogenic training (AT) is a method of reducing the stress response developed in Europe in the early years of the 20th century by the brain physiologist Oskar Vogt. Vogt was working with some of his most experienced hypnotic subjects when he noticed that as his subjects put themselves into a hypnotic state, their tension, fatigue, and headaches decreased.

In the 1930s, Johannes Schultz, a psychiatrist from Germany, continued the work of Professor Vogt. He discovered that those who were able to reach deep relaxation through hypnosis experienced 2 pleasant physical sensations. One was heaviness, and the other was warmth, primarily in their arms and legs. Shultz's subjects also frequently reported that their headaches went away.[1]

From these observations, Schultz developed a system designed to activate the parasympathetic nervous system using suggestions focusing on warmth and heaviness. The simple suggestions caused the body to respond physically by increasing blood flow to the extremities and relaxing the muscles. Schultz found that those who practiced this simple method were able to reach deep levels of rest similar to hypnosis and meditation. Schultz's work, *Autogenic Training*,[2] is the classic account of the autogenic training method.

One of Schultz's students, Wolfgang Luthe, immigrated to Canada from Germany and introduced the technique to North America. He also translated much of Shultz's work from German to English. Since then, autogenics has become a time-honored, effective means for reducing stress-related symptoms, including insomnia, anxiety, and tension. Autogenics can be practiced anywhere. It is easy to learn, simple to practice, and includes the positive aspects of hypnosis without requiring a trained hypnotist.

18.3 How Autogenics Works

The pleasant feeling of warmth in the extremities happens because of **vasodilation.** Referring to the fight-or-flight response, vasodilation occurs when the impending threat has passed and there is no longer a need to run or fight. The parasympathetic nervous system is designed to bring the body to a state of homeostasis, or balance. In response to parasympathetic nervous system activation, the blood vessels increase in diameter, allowing the blood to flow back to the extremities, creating the feeling of warmth. The pleasant feeling of heaviness is characteristic of muscles, formerly tensed to run or fight, becoming relaxed.

18.4 Benefits of Autogenics

Studies have demonstrated the effectiveness of autogenics on a variety of stress-related symptoms. Autogenic training has been found to reduce heart rate, blood pressure, respiratory rate, and muscle tension. Autogenic training has also shown to be effective in dealing with anxiety and a variety of stress-related symptoms.[3]

Autogenics works to reduce headaches, including tension headaches[4] and migraine headaches.[5] One specific study showed a significant decrease in tension and also a reduction of migraine headaches, resulting in a substantial reduction in the consumption of migraine drugs and analgesics for subjects who practiced autogenics for 8 months. The people in this study showed immediate relief from headaches at the onset of the 8 months, and the benefits continued throughout the study.[6]

Findings from an interesting study with cancer patients who practiced autogenic training showed a significant reduction in anxiety related to their cancer.[7] The patients in this study also described having relief from guilt feelings, acceptance of their bodies without judgment, and feelings of empowerment.

Additional studies have shown that autogenics has been effective in dealing with insomnia[8] and muscle tension.[9] It also was found to help decrease the effects of posttraumatic stress disorder.[10] AT even seems to improve biathletes' shooting performance,[11] possibly because of its calming effect. For years, autogenics has been used by European athletes to enhance performance. By entering a trance-like state, athletes more effectively realize gentle suggestions combined with visualization about optimal performance.[8]

One study[12] examined the effect of autogenic training on pilots' flight performance. Compared to the control group, the group that received autogenic training showed a significant improvement in performance and a substantial decrease in physiological arousal during emergency flying conditions. The pilots who practiced autogenics were able to remain calmer and more in control during stressful flying situations.

Considering how chronic stress leads to so many maladies, we are reminded of why deep relaxation, as occurs while practicing autogenic training, can have such a powerful effect on improving the health of those who suffer from these disorders. The rest-and-repair that happens when the parasympathetic nervous system is activated results in the natural reduction of many health problems.

FYI

Case Study in Autogenics

The effects of autogenics were shown in a case study of a young woman (K. S.) who was suffering from severely disturbing nightmares almost every night because of a horrible automobile accident. After she began to practice autogenic training regularly, the frequency and severity of the posttraumatic nightmares dropped significantly, and they ceased altogether by the end of the treatment. The report stated:

> It is important to note that upon the completion of treatment, the patient began reporting positive changes in her anxiety levels, and she gradually became more socially active. Her sleep latency (the time it took for her to fall asleep) decreased from several hours to approximately 30 minutes. The patient estimated that the panic attacks diminished in intensity and ceased by the end of the treatment. Although it took K. S. some time to begin driving again, she actively began utilizing autogenic phrases to control and overcome her fear of "being behind the wheel." K. S. reported that the treatment helped her recover her sense of control over her anxieties using specific tools that she learned to master in a brief period of time.

Source: *"The Treatment of Recalcitrant Post-traumatic Nightmares with Autogenic Training and Autogenic Abreaction: A Case Study," by M. R. Sadigh,* Applied Psychophysiology and Biofeedback, *24(3) (1999): 203.*

STRESS STUDIES

A Meta-analysis of Autogenic Training

A **meta-analysis** combines data from several different research studies to gain a better overview of a topic than what is available in any single investigation.* In a meta-analysis** of autogenic training, AT was found to be positively beneficial for the following maladies:

- Tension headache
- Migraine headache
- Mild-to-moderate essential hypertension
- Coronary heart disease
- Bronchial asthma
- Somatoform pain disorder (unspecified type)
- Raynaud's disease
- Anxiety disorders
- Mild-to-moderate depression
- Functional sleep disorders

The same meta-analysis found AT to have a beneficial effect on mood, cognitive performance, quality of life, and physiological variables.

Source: *Taber's Cyclopedic Medical Dictionary *(22nd ed.) (Philadelphia: F.A. Davis Co., 2013).*
*** "Autogenic Training: A Meta-analysis of Clinical Outcome Studies," by F. Stetter & S. Kupper,* Applied Psychophysiology and Biofeedback, 27*(1) (2002): 45.*

18.5 Experiencing Autogenics

Creating Favorable Conditions

According to the authors of *Autogenic Training in Psychotherapy,* several factors are essential for autogenic training to be successful.[13] Beneficial results are more likely with the following conditions:

1. High motivation and cooperation.
2. A reasonable degree of self-direction and self-control.
3. Maintenance of a specific body posture conducive to success, including the following:
    a. Lying on a carpeted floor or a bed (soft, flat surface).
    b. Hands resting comfortably to the sides, palms up, fingers loose and extended.
    c. Feet forming a "V," with heels not touching and toes pointing outward.
    d. The head and neck comfortably supported with a pillow.
4. Reduction of external stimuli—turn off all possible audio devices including smartphones, telephones, and televisions, reducing the possibility of being interrupted.
5. Focus on internal processes to the exclusion of the external environment—attention is entirely on what is happening internally.
6. Presentation of the suggestions in a repetitive and monotonous manner, to avoid excitation and create an environment conducive to passivity.

For autogenics to work, it is best to have a passive attitude without "trying" to make anything happen. There should be no conscious effort to force feelings of warmth, heaviness, or any other suggested sensations. Contrary to other relaxation techniques that involve more voluntary mental activity, autogenics requires passive alertness; an "allowing" rather than a "doing."

This type of passive alertness is known as **effortless effort,** signifying a lack of exertion in allowing sensations to happen. You want to be an observer, rather than focusing on how well or how poorly relaxation is happening. In taking this attitude, if nothing happens, that is okay. If sensations do occur, that is okay, too, but they are not to be overly celebrated. Simply take what comes and continue passively.

Stress Relief Audio File

ACTIVITY *Want to listen?*
This asset is only available to your instructor at the moment. Please reach out to them for file access!

Autogenics works best lying on a carpeted floor or a bed. Autogenics also can be done seated comfortably in a chair. In the seated position, sit comfortably in a high-back chair with armrests for head and arm support. Feet should be flat on the floor, with knees slightly apart. The individual can mentally repeat autogenic suggestions, or someone else can read a script of the suggestions. The latter is usually preferable when one is learning autogenics. The CengageBrain website audio files have the autogenics relaxation exercise to guide you through the process.

The autogenic suggestions usually follow this sequence:

1. Focus on heaviness in the arms and legs.
2. Focus on warmth in the arms and legs.
3. Focus on warmth and heaviness in the heart area.
4. Focus on breathing.
5. Focus on coolness in the forehead.

18.6 A Simple Autogenics Script

Make yourself as comfortable as possible. Gently close your eyes. Take in a nice, easy, comfortable breath through your nose . . . keeping your mouth closed, exhale. Again, a comfortable breath in . . . and exhale. Continue to breathe deeply in and out, keeping your eyes and mouth closed. (long pause)

Allow all thoughts of past and future to drift away. Bring yourself fully to this moment by focusing on your inner experience. (pause)

Now let your attention focus on your left arm and hand. Feel how they are gently supported by the surface below. Now, breathing slowly and softly, focus passively on your left hand and arm while repeating to yourself, “My left hand and arm are heavy.” Repeat this silently to yourself for a few moments. (pause)

Now shift your attention to your right hand and arm, sensing how they are gently supported from below. While breathing evenly, repeat to yourself, “My right hand and arm are heavy.” Continue saying this silently to yourself for a few moments. (pause)

Now let your mind focus on both hands and arms. Become deeply aware of how they feel. If you have trouble sensing both at the same time, shift your attention back and forth from one to the other. As you take deep, natural breaths, repeat silently, “My hands and arms are heavy.” Repeat this phrase to yourself for a few moments. (pause)

Now imagine that the feelings of heaviness and relaxation in your arms are spreading effortlessly throughout your body, flowing to every other part. Each time you breathe out, let yourself sink into deeper relaxation. (pause)

Now, keeping your eyes closed, let your attention focus on your left leg. Be aware of your left thigh, knee, lower leg, ankle, foot, and toes. Now, as you breathe comfortably, repeat quietly to yourself, “My left leg is heavy.” Continue saying this to yourself for a few moments. (pause)

Now let your attention move to your right leg, and as you breathe evenly, repeat to yourself, “My right leg is heavy.” Silently repeat this phrase to yourself for a few moments. (pause) Notice the feelings of deepening relaxation in your right leg as you breathe evenly in and out. (pause)

Now focus on both legs. If you have trouble sensing both at the same time, simply shift attention from one to the other. Keeping your eyes softly closed and breathing evenly, repeat to yourself, “My legs are heavy.” Repeat this phrase for a few moments to yourself. (pause)

Let your attention move to your arms again. Say to yourself, “My arms are warm.” Breathing comfortably and evenly, and letting the warmth spread in your arms, repeat this phrase for a few moments. (pause)

Now silently repeat to yourself, “My legs are warm.” Continue saying this to yourself for a few moments as you breathe evenly, allowing sensations of warmth to flow throughout your legs. (pause)

Now let your mind scan your arms and legs. Notice how they feel. Silently describe any sensations to yourself. (pause)

Now, let your attention move easily around your entire body, sense the spreading feelings of warmth and heaviness in your arms, neck, shoulders, chest, stomach, and legs. As you breathe evenly, say to yourself, “My entire body is warm and heavy.” Continue for a few moments. (long pause)

Now mentally scan your body, being aware of any sensations of warmth, heaviness, and relaxation. Let these pleasant feelings spread for a few moments as you become more aware of them. (pause)

Now, as you sink effortlessly into deeper relaxation, begin to sense the regular beat of your heart or the pulse in some other part of your body. Let yourself become quiet and very aware of your heartbeat and pulse. Breathing evenly and comfortably, repeat to yourself, “My heart is calm and regular.” (pause)

Move your attention to your breath as you say to yourself, “My breathing is slow, soft, and comfortable.” Focus on this for the next few moments. (pause)

Move your awareness to your forehead and say to yourself, “My forehead is cool, smooth, and relaxed.” (pause)

Notice how comfortable, quiet, and still your body feels. Let yourself experience the slow, regular beating of your heart as you breathe easily and deeply. Feel relaxation effortlessly spreading throughout your body. Take a few moments to enjoy these pleasant sensations completely. (pause)

If you feel any areas of remaining tension, imagine feelings of wonderful warmth flowing easily to that place as you continue to breathe deeply. Passively let deep relaxation spread everywhere. (pause)

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

STRESS STORIES

So Relaxed She Feels Like She's Floating

Autogenic training can be surprisingly relaxing. Once, after leading a group through a good session of yoga, I invited the participants to lie on the floor and close their eyes. I led them through a relaxing autogenic sequence, which they seemed to enjoy.

Afterward, one of the members of the class came up and with some energy asked me, "What did you just do to me?!" Puzzled, I asked her what she meant. She told me that while she was doing the autogenic exercise, she became incredibly relaxed. After a few moments of deep relaxation, she said she felt like she was floating in the air, entirely suspended about 3 feet off the ground. I asked her if this sensation was unpleasant. She said that it was one of the most wonderful, relaxing, peaceful feelings she had ever experienced. I assured her that she had stayed on the ground the whole time, but I also congratulated her for reaching such deep levels of relaxation. She told me that she felt magnificent. I suggested to her that it sounded like her mind and body must enjoy autogenics to have produced such a remarkably relaxing experience.

—MO

Completely enjoy this feeling of deep relaxation. Allow yourself to be still and rested . . . (long pause)

(Speak slowly) As you prepare to end this session, take a deeper breath in and out, filling your lungs fully and then easily releasing the breath. Gently begin to move your fingers, hands, arms, legs, and feet to revive the muscles. Keeping your eyes closed, turn your head from side to side. Gently stretch your whole body by extending your arms. As you bring your arms back down, turn to lie on your side, bringing your knees up toward your chest. Slowly open your eyes, and slowly lift yourself into a sitting position. Remain here for a few moments, enjoying the feeling of relaxation and stillness before returning to normal activity levels.

You may want to modify this autogenics script to suit your preferences. We're presenting this script to get you started and provide you with a format for introducing autogenics.

Stress Relief Audio File

ACTIVITY *Want to listen? This asset is only available to your instructor at the moment. Please reach out to them for file access!*

18.7 Conclusion

Autogenics is self-directed relaxation using suggestion. It provides pleasant feelings of warmth and heaviness because of dilation of blood vessels in response to activation of the parasympathetic nervous system. Autogenic training is beneficial for a variety of stress-related conditions.

ACTIVITY

18.1 Autogenics

Purpose To allow you to practice deep relaxation using autogenics.

Directions Prepare your environment for relaxation. Follow along with the Autogenics Stress Relief Activity instructions found in the CengageBrain website audio files. Practice this technique at least 2 times according to the instructions on the audio file. At least once, do it immediately before you sleep at night. Make sure it is the last thing you do before sleep. Do it at times when you will not be disturbed. Allow approximately 15 minutes to complete the exercise.

After completing autogenics, respond to the following questions. Describe how you were feeling about your stress levels.

Afternoon:

1. How did you feel before the exercise?
2. What was your experience during the exercise?

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

3. How did you feel immediately after the exercise?
4. How did you feel several hours after completing the exercise?

Right before sleeping at night:

1. How did you feel before the exercise?
2. How quickly did you fall asleep?
3. How did you sleep, and how refreshed did you feel when you awakened the following morning?
4. How did this differ from a typical night's sleep?

Classroom experience (if applicable):

1. How did you feel before the exercise?
2. What was your experience during the exercise?
3. How did you feel immediately after the exercise?
4. How did you feel several hours after completing the exercise?

Summary: After you have practiced the exercise and described your experiences, include a brief review of what you liked and did not like about this technique. Compare this technique to some of the others you have practiced. Would this be a relaxation technique you would consider regularly using for stress management? Why or why not?

Key Points

- *Autogenic* comes from the Greek words *autos* meaning self, and *genos* meaning origin. Hence, autogenics is self-directed relaxation using suggestions.
- Studies show that autogenics is effective in reducing a variety of stress-related conditions.
- The pleasant feeling of warmth in the extremities can be explained physiologically as vasodilation in response to parasympathetic nervous system activation.
- Several factors outlined in this chapter are essential for the practice of autogenic training to be successful.
- A simple autogenic script can be used to introduce you to autogenics.

Key Terms

autogenics
suggestion
autogenic training (AT)
vasodilation
meta-analysis
effortless effort

References

1. *Mind as Healer, Mind as Slayer*, by K. R. Pelletier (New York: Dell Publishing, 1977).
2. *Das Autogene Training,* by J. Schultz (Stuttgart: Georg-Thieme Verlag, 1953).
3. "Autogenic Training for Reducing Anxiety," by A. Cuncic, *Verywell Mind,* (November 29, 2019), retrieved December 6, 2019, from https://www.verywellmind.com/.
4. "Effectiveness of Autogenic Training on Headache: A Systematic Review," by E. Seo, E. Hong, J. Choi, Y. Kim, C. Brandt, & S. Im, *Complementary Therapies in Medicine, 39* (2018): 62–67.

5. "Effect of Biofeedback-Assisted Autogenic Training on Headache Activity and Mood States in Korean Female Migraine Patients," by E. H. Kang, J. E. Park, C. S. Chung, & B. H. Yu, *Journal of Korean Medical Science, 24*(5) (2009): 936–940.
6. "Effect of Autogenic Training on Drug Consumption in Patients with Primary Headache: An 8-Month Follow-Up Study," by T. Zsombok, G. Juhasz, & A. Budavari, et al., *Headache: The Journal of Head and Face Pain, 43*(3) (2003): 251.
7. "Mood and Distress in Cancer Patients after Autogenic Training (AT): A Pilot Study in an Italian Oncologic Unit," by G. Marafante, L. Bidin, & L. Cavanna, *Annals of Oncology 27*(4) (2016): iv93–iv94.
8. "What to Use Instead of Sleeping Pills," by T. J. Coates & C. E. Thoreson, *Journal of the American Medical Association, 240* (1978): 2311–2312.
9. "The Effects of Progressive Muscle Relaxation and Autogenic Relaxation on Young Soccer Players' Mood States," by H. A. Hashim & H. Hanafi Ahmad Yusof, *Asian Journal of Sports Medicine, 2*(2) (2011): 99–105.
10. "Effect of Autogenic Training on Cardiac Autonomic Nervous Activity in High-Risk Fire Service Workers for Posttraumatic Stress Disorder," by S. Mitani, M. Fujuita, S. Sadamoto, & T. Shirakawa, *Journal of Psychosomatic Research, 60*(5) (2006): 439–444.
11. "Effects of Autogenic and Imagery Training on the Shooting Performance in Biathlon," by A. Groslambert, R. Candau, F. Grappe, B. Dugué, and J. D. Rouillon, *Research Quarterly for Exercise and Sport, 74*(3) (2003): 337.
12. "Autogenic Feedback Training Exercise and Pilot Performance: Enhanced Functioning Under Search-and-Rescue Flying Conditions," by P. S. Cowings, M. A. Kellar, R. A. Folen, W. B. Toscano, & J. D. Burge, *International Journal of Aviation Psychology, 11*(3) (2001): 303.
13. *Autogenic Training: A Psychophysiologic Approach in Psychotherapy*, by J. Schultz & W. Luthe (New York: Grune & Stratton, 1959).

chapter 19

Progressive Relaxation

Mickey Cashew/The Image Bank/Getty Images

> Tension is who you think you should be. Relaxation is who you are.
>
> —*Chinese Proverb*

I don't understand how progressive muscle relaxation can work. How can tensing my muscles make me feel more relaxed?

What happens when a muscle contracts?

Learning Objectives

Study of this chapter will enable you to do the following:

19.1 Describe how muscles contract and relax.

19.2 Explain the benefits of progressive muscle relaxation.

19.3 Differentiate between active and passive relaxation methods.

19.4 Experience the difference between muscle relaxation and muscle tension.

19.5 Experience the benefits of progressive muscle relaxation (PMR) and passive progressive relaxation.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

Real People, Real Stories

Students Share Their Experiences with PMR

I really liked doing PMR. I asked my friend to do this with me, and afterward, he couldn't quit saying to me how great he felt. I had to agree. I never thought that tensing your muscles and then releasing them would relax them so much. As I began the exercise, the first muscles we tensed were the hands and forearms. After I did that, it was like that part of my body was gone, sunk into the carpet. As I continued to do each muscle, they seemed to disappear, and after I had done every muscle, I felt like I'd sunk into a giant pillow. The comparison of contracting and releasing made my body seem so light. I felt totally relaxed, and my muscles had no tension whatsoever. The favorite muscle group to do was my thigh area. I really enjoyed this exercise, and it put me in a good mood to just release that tension in my muscles. I think this relaxation technique could be used at any time or any place.

—Shantelle T.

***

The progressive relaxation exercise was different and interesting. It was so helpful for me to see the difference between tension and relaxation. I was taken aback by how tense some of my muscles were at their baseline. I know my body is tight a lot, and my muscles are always sore from football. But I never really take the time to feel what it's doing to my body, and to feel the immediate difference between tension and relaxation. When I would tense up my hands into a fist, my hands and arms were tight, and as soon as I breathed out and released all the tension, I felt overwhelming relaxation. I noticed an enormous difference in my face and neck as well. My neck is always tense and my face, especially my eyes and jaw muscles, are continually strained. When I allowed relaxation to take over my body, I liked the heaviness in my muscles and the calm, peaceful feeling. For the rest of the day, I felt very aware when any of my muscles started to become tense. Sometimes, I know that I don't realize when I'm reacting to stress, so I appreciated this exercise as it allowed me to become more aware of my body as a whole.

—Tyler G.

19.1 Progressive Relaxation

Headaches, stiff neck, tight shoulders, grinding teeth, and low back pain—all these annoying symptoms can result from muscle tension. Although it is not life-threatening, muscle tension may be the most common and frustrating symptom of stress. Muscles respond directly to thoughts of perceived danger by tensing in preparation for action. **Progressive muscle relaxation** (PMR) techniques are specifically designed to reduce muscle tension through focused attention.

FYI

The Birth of PMR

Little did Edmund Jacobson know that a seemingly adverse event during his days as a research assistant at Harvard in the early 1900s would provide an opportunity leading to the discovery of PMR, still a popular and effective stress-management technique a century later.

Jacobson was a research assistant to Hugo Munsterberg, a professor who was considered one of the great minds of the day. When Jacobson's data supported theories in opposition to Munsterberg's hypothesis, he fired Jacobson.

With time on his hands, Jacobson turned his attention to the study of the startle response, a jerking or startle reaction that occurs naturally in response to sudden loud noises. He discovered that deeply relaxed students showed no obvious startle response to a sudden noise. This discovery proved to be the first systematic study of the effects of relaxation on the body and eventually led to the birth of PMR.

Source: Mosby's Complementary and Alternative Medicine *(3rd ed.), by L. Freeman (St. Louis: Mosby, 2009).*

19.2 Background

Edmund Jacobson, a doctor living in Chicago, first caught on to the idea of tension and relaxation in the muscles while he was working with patients who had a variety of maladies. He noticed 1 common characteristic in nearly all his patients—muscle tension. Based on his earlier research at Harvard and his current work with his patients, he recognized that the severity of many disorders could be diminished by reducing or relieving muscle tension.

Jacobson found that most of his patients had no idea that they had excess muscle tension in many places in their bodies. He noticed that when he asked his patients to consciously tighten these tensed-up areas, and then deliberately relieve that tension, the contracting muscles became relaxed. Jacobson understood that a muscle could not contract and relax at the same time. By actively tensing a muscle and then intentionally releasing the contraction, the muscles returned to their naturally relaxed position.

Thus was born the PMR relaxation technique, also called **progressive neuromuscular relaxation**. The parasympathetic nervous system (relaxation) is activated when muscle tension is turned off. Although Jacobson's original technique has evolved and branched out into various adaptations, progressive relaxation still is a commonly used form of relaxation therapy in Western society today.

19.3 Muscle Physiology

To understand how progressive relaxation works as an effective form of relaxation, it is helpful to have a basic understanding of how muscles function. The human body has hundreds of voluntary skeletal muscles. Skeletal muscles engage in several physiological functions, including generating force (strength and speed), generating heat, supporting posture, and aiding in breathing.

Each skeletal muscle is composed of many muscle fibers (cells), each of which can contract or relax. Muscle fiber contracts when it receives a nerve impulse from the central nervous system (brain and spinal cord). After contracting, a muscle fiber relaxes until it gets another nerve impulse.

A **motor unit** consists of a single motor nerve and all the muscle fibers to which it sends impulses (as shown in Figure 19.1). When a motor unit receives a message from the nervous system, each muscle fiber responds with a burst of energy. When this happens, tiny filaments, which are the smallest parts of the muscle, pull on each other and cause a **muscle contraction,** or shortening of the muscle fibers.[1]

All-or-None Principle

Muscle contraction is based on the **all-or-none principle**. Muscle fiber contracts entirely or not at all. Skeletal muscles are naturally in a state of non-contraction, or relaxation. When a signal from the nervous system reaches a muscle motor unit anywhere in the body, all the muscle fibers in this motor unit contract together. When the nerve impulse stops, the contraction stops and the muscle fiber relaxes, returning to its normally non-contracting state.

19.4 Muscles and Relaxation

What does muscle physiology have to do with stress management? Many muscles in the body remain in a chronically contracted state because they repeatedly receive messages from the nervous system to contract as part of the fight-or-flight response. Recall from earlier chapters that an immediate action of the fight-or-flight response is an increase in muscular tension to generate instant power to either run or fight.

This is an automatic response in the presence of a threat. As we have mentioned, most modern threats are those we create in

FYI

What Is Bruxism?

"Keep a stiff upper lip" or "Get a grip!" That's often the advice we get—and give—on how to cope with stress. If you take it literally, the result could be grinding your teeth or clenching your jaws. Sometimes we grind our teeth—called bruxism—while we sleep. Wakeful bruxism occurs when we sustain prolonged or repetitive tooth contact, or brace or thrust the jaw bone. The cause of bruxism is usually stress. Symptoms include a dull headache, wearing down of the teeth, or a sore jaw. People who frequently grind their teeth are more likely to feel stressed during the day than those who don't clench their teeth, and women are more likely than men to say that they grind their teeth. Your dentist can fit you with a mouth guard to protect your teeth while you sleep. If stress causes you to clench or grind, find a way to relax! Don't make your teeth the brunt of your stress.

Source: *"International Consensus on the Assessment of Bruxism: Report of a Work in Progress," by F. Lobbezoo, J. Ahlberg, K. G. Raphael, et al.,* Journal of Oral Rehabilitation, 45*(11) (2018): 837–844.*

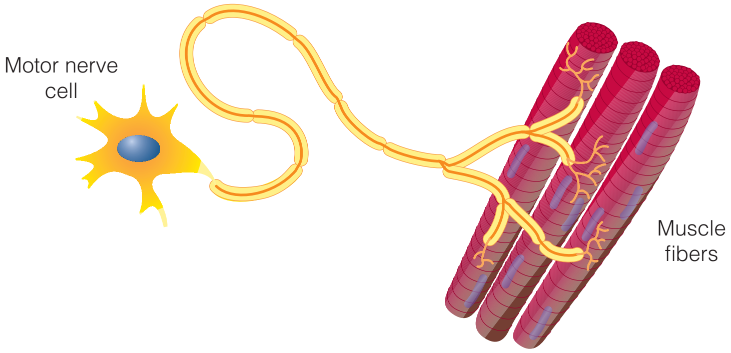


FIGURE 19.1
Motor unit, composed of a motor nerve and muscle fibers.

Source: Weight Training for Life *(10th ed.), by J. Hesson (Belmont, CA: Wadsworth/Cengage Learning, 2012).*

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

STRESS STORIES

Progressive Relaxation and Yoga

We had just finished learning about progressive relaxation in class, which included an exercise at the end of the session. One student approached me after class, eager to relate her experience. She really enjoyed progressive relaxation, saying that she felt loaded with energy and at the same time, peaceful and calm. Her comment to me—which I hadn't considered before—was that progressive relaxation seemed to her to be a lot like yoga. She explained that when she's stretching her body through the poses in yoga, her muscles contract. When her body releases from the stretch, the muscles naturally relax.

Each time she consciously contracted her muscles while doing PMR and then relaxed them afterward, she achieved the same feelings of deep release from tension as she does with yoga. Focusing on releasing muscle tension, using whatever method, works to relax the body. Relaxation is our natural state.

—*MO*

our mind. But because we still perceive threats, the autonomic nervous system responds the same way it did in ages past—by gearing up to run or fight. As a result, our muscles tense. The dilemma is that because our modern threats—financial concerns, school requirements, relationship battles—do not end immediately, the fight-or-flight response remains activated and, therefore, muscle contraction is continuous.

A chronically contracting muscle eventually becomes painful. One place where this frequently happens is in a person's shoulders, which might feel tight and sore because these muscles are in a continual state of tension. Even while we sleep, thoughts in the unconscious mind can produce muscle tension. Common manifestations of muscle tension during sleep are jaw-clenching and teeth-grinding.

STRESS STUDIES

Curbing Late Night Hunger Through Relaxation

Regularly practicing relaxation may be a critical part of treatment for the condition known as night eating syndrome (NES). NES is characterized by a lack of appetite in the morning, consumption of 50% or more of daily food intake after 6:00 p.m., and difficulty falling and staying asleep. NES has been associated with stress and with poor results at attempts to lose weight.

Researchers randomly assigned subjects to either a relaxation group (each practiced 20 minutes of progressive relaxation each day) or a control group (each quietly sat for the same amount of time each day). The subjects who practiced the relaxation exercises daily for a week showed lowered stress, anxiety, fatigue, anger, and depression. The results showed that 20 minutes of the muscle relaxation exercise significantly reduced stress, anxiety, and salivary cortisol immediately after each session. Progressive relaxation was also associated with substantially higher morning and lower afternoon and evening ratings of hunger, and a trend toward both more breakfast and less nighttime eating. It follows that relaxation exercises may have a positive effect on preventing obesity.

Source: *"Behavioral Management of Night Eating Disorders," by L. A. Berner & K. C. Allison,* Psychology Research and Behavior Management, *6 (2013): 1–8.*

19.5 How PMR Works

Progressive muscle relaxation activates the parasympathetic nervous system in a consciously directed way as you first tense a group of muscles and then consciously release the tension in that muscle group. The technique is called progressive muscle relaxation because you move progressively through the major areas of the body.

Of the many variations of the original PMR technique in use today, all have in common the objective of teaching a person to relax the muscles at will by first developing conscious awareness of what it feels like to be tense and then what it feels like to be relaxed. Once you learn to distinguish between tension and relaxation, you can control tension. The primary feature of this method is the ability to relax muscles selectively on command.

19.6 Benefits of Progressive Relaxation

Progressive relaxation effectively turns off the stress response and induces relaxation.[2] As a result, many adverse physical, mental, and emotional conditions associated with chronic stress can be reduced or eliminated with regular practice of PMR. It helps decrease insomnia[3] and posttraumatic stress disorder.[4] One study showed that those who practiced progressive relaxation experienced a lower heart rate, less anxiety, lower perceived stress, and a significant decrease in salivary cortisol (indicating a physiological reduction in sympathetic nervous system activity) compared to control subjects. The subjects in this study also self-reported increased relaxation.[5]

Long and Haney found progressive relaxation to be as effective as aerobic activity in decreasing anxiety and increasing self-efficacy among working women.[6] In additional controlled studies, progressive relaxation has been effective in reducing the effects of other stress-related maladies including headaches,[7] depression,[8] aversion to chemotherapy,[9] low back pain,[10] postpartum depression,[11] and hypertension.[12]

Stress Relief Audio File

ACTIVITY *Want to listen? This asset is only available to your instructor at the moment. Please reach out to them for file access!*

19.7 How to Do Progressive Muscle Relaxation

Let's look at 3 forms of PMR—active progressive muscle relaxation, a variation called incremental muscle relaxation, and passive progressive relaxation.

Active Progressive Muscle Relaxation

In active progressive muscle relaxation, you inhale while you tense a group of muscles fairly tightly—to about 70 to 80% of a maximum contraction. Once they are contracted sufficiently, you hold them in this state of tension for up to 8 seconds while holding the breath. Then you immediately release those tightened muscles for 15 to 30 seconds. During this relaxation phase, you slowly exhale while you consciously relax the muscles even more completely.

As you exhale, imagine tightness and pain flowing out of your muscles. Feel the muscles become loose and limp, the tension flowing away like water out of a faucet. Notice the difference between tension and relaxation. By tensing your muscles first, you will find that you can relax your muscles more than you would if you were to try to relax them directly. You focus awareness on the sensation of relaxation resulting from the release of the tension, and how this feeling differs from the sensation of tension. Careful examination of this change in tension is essential.

While you are either seated or lying down, focus on a specific area of the body, such as your left arm and hand. Clench your fist, tightening it for several seconds and then relaxing your hand for 15 to 30 seconds.

Repeat this procedure at least once. If an area stays tense, repeat the tensing and relaxing up to 5 times. Progressively move through the body—such as the arms, the face, the torso, and the shoulders—tensing and releasing each muscle group as you go.

With some relaxation techniques, the mind tends to wander because it limits its focus to thoughts or images. Because PMR involves both the mind and the body, you're more likely to stay focused. Many individuals have remarkable success with this technique because, by concentrating on tensing and relaxing muscle groups, they stay focused more easily.

Incremental Muscle Relaxation One variation of progressive muscle relaxation changes the process slightly. **Incremental muscle relaxation** is a method that sensitizes the individual to actual muscle tension levels. Working through each group of muscles, first tense the muscles maximally to what feels like 100% contraction. After 5 to 10 seconds of contracting maximally, relax that muscle group entirely for 15 to 30 seconds. Contract the same muscles a second time, this time contracting to what feels like about 50% of maximal contraction. After 5 to 10 seconds of holding this contraction, relax the muscles completely for 15 to 30 seconds. On a third contraction of the same muscles, flex the muscles at no more than 10% of maximal contraction. At this point, you are barely creating any tension. Hold this contraction for 5 to 10 seconds, and then relax the muscles completely for 15 to 30 seconds. Progress to the next set of muscles and follow the same procedure.

CULTURE CONNECTION A More Western Way to Relax

Meditation, guided imagery, deep breathing, and several of the other stress-management tools in this book have their roots in Eastern philosophy and practice. The function of these tools is to relax the mind or body in passive ways. By contrast, the roots of PMR are planted firmly in the West. Because it is an active form of relaxation, it has broad appeal to our Western culture, where we often think that nothing happens unless we are actively involved—if we are not "doing" something, nothing is happening. For individuals who struggle with the other types of relaxation exercises because their mind tends to wander too much, or they get bored because they aren't sufficiently involved, PMR is a good alternative.

When you are first learning PMR, a facilitator to guide you will give you the best results. Students sometimes report difficulty in knowing how to tense a muscle group. To guide you, before practicing progressive relaxation, review the tensed and relaxed pictures included in this chapter. Included on the CengageBrain website audio files is a relaxation exercise titled Progressive Relaxation to guide your practice.

Active Progressive Relaxation Script Make yourself as comfortable as possible. Gently close your eyes. Take a nice, natural, deep breath in through your nose . . . and exhale out your nose. Again, a deep breath in . . . and exhale. Continue to breathe deeply in and out, keeping your eyes closed. (long pause) Allow all thoughts of your past and future to drift away.

When you tighten an area, do it only to a point at which you feel real tension but not pain. If a specific area or muscle is sore or uncomfortable, skip that area. As you tighten the various muscles during this session, inhale and briefly hold your breath. As you exhale, you release the tension.

Now make a fist with your hands, pressing the fingers against your palm, tightening the muscles in your wrists and forearms, until you feel moderate tension in that entire area. Feel the pulling tightness in your fingers, hands, and forearms . . . hold it for a moment longer . . . and now, as you breathe out, let those muscles go limp, like a rag doll. The tension drains naturally from your fingers, wrists, and forearms. Feel the pleasant relief of flowing relaxation. Notice how different this is from tension (pause).

Again, tighten your fists and feel the tension build . . . hold it for a moment . . . and now, breathing out, let these muscles go limp, and say to yourself, “My arms and hands feel relaxed and calm.” (pause)

Notice carefully how different this feels from tension. (pause)

One last time, make fists with your hands while tensing your wrists, forearm, and upper arm muscles. Hold that tension and feel the stretching tightness . . . and now as you breathe out, let your hands and arms go limp, saying to yourself, “My hands and arms feel relaxed and calm.” Let all remaining tension flow out through your fingertips, enjoying the sense of relief. (pause)

While letting your arms and hands stay deeply relaxed, now focus your attention on your face and head. Concentrating on how it feels, close your eyes tightly, as if you were in a dust storm. Stretch your forehead muscles up as far as you can. Pull the corners of your mouth back and feel the tension in every part of your face. Experience that sensation. Now, breathing out, let all these muscles go completely limp and say to yourself, “My face and forehead feel relaxed and calm.” Notice how different this feels from tension. Enjoy the sensation of relaxation. (pause)

Each time you exhale, feel your hands, arms, face, and forehead become even more deeply relaxed. (pause)

Now shift your attention to your neck muscles. These are usually the first ones to become tense when you experience stress. Keeping your mouth closed, tighten your neck muscles by gradually moving your chin toward your chest and tightly forward until you feel the tension around the base of your neck. Stretch those muscles and hold for a moment. Now, breathing out, let these muscles go limp, allowing your head to return to a comfortable position. And as you breathe out again, say to yourself, “My neck feels relaxed and calm.” Sense the flowing relief and notice how different it feels from tension. (pause)

Each time you exhale, feel any remaining tension flow out of your hands, arms, face, and neck. (pause)

Now, allowing your arms and neck to remain as relaxed as possible, focus on your shoulders. Move them up toward your ears as high as you can and feel tightness there. Hold that tension for a moment . . . and now, breathing out, release the tension, letting your shoulders go limp as a rag doll. Say to yourself, “My shoulders are relaxed and calm.” Notice how different this feels from the tension. (pause)

Now, as you breathe comfortably, let all remaining tension flow out from your hands, arms, face, forehead, neck, and shoulders. Enjoy the calm feelings of spreading relaxation. (pause)

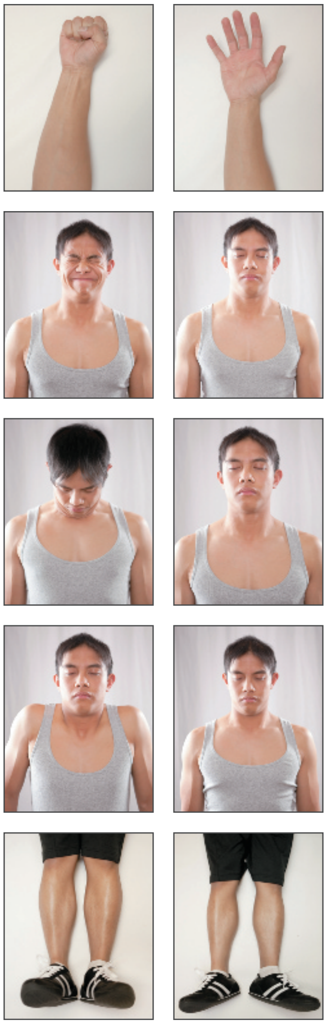
Now focus on your chest and stomach. Allowing your arms, shoulders, and neck to remain relaxed, inhale deeply, and hold it while you tighten the muscles in your stomach and around your chest . . . feel the tension build . . . and now let go completely, breathing out, and feeling relaxation flow through this whole area. Say to yourself, “My chest and stomach are relaxed and calm.” Notice how different this feels from the tension. (pause)

Keeping your eyes softly closed, let your hands, arms, face, neck, shoulders, chest, and stomach become even more deeply relaxed. (pause)

Now think of your legs and feet. Tighten the muscles in your buttocks and thighs and flex your feet by bending them up and toward your head. Feel the tension build . . . hold it for a moment . . . and now as you breathe out, let all these muscles go limp. Say to yourself, “My legs and feet feel relaxed and calm.” Notice how different this feels from the tension. (pause)

Each time you exhale, feel any remaining tension flow out easily from your hands, arms, face, neck, shoulders, chest, stomach, legs, and feet. Repeat to yourself, “My entire body is relaxed and calm,” as you easily and naturally breathe in and out. (pause)

Keeping your eyes closed, sense each part of your body. If you find any remaining areas of tension, tense them and then, breathing out, release the muscles until your entire body is comfortably, deeply relaxed. (long pause)


Jennifer Evans/Candy Apple Photography

Contract and release muscle groups for relaxation using active PMR.

Passive Progressive Relaxation

Body Scan **Passive progressive relaxation** is a less active, mindful method of progressing through the various parts of the body using a technique called the **body scan.** This method does not involve active contraction of muscles but, rather, passive scanning of the body. The body scan allows individuals to develop a focused, concentrated awareness of the body. Scanning is used for at least 2 purposes:

1. As a means of checking to see if tension exists.
2. As a device to enable the individual to feel in touch with his/her body as a whole.

Jon Kabat-Zinn, director of the Stress Reduction Clinic at the University of Massachusetts Medical Center, introduced this form of relaxation as the first method for patients to use to discover their bodies in a non-judgmental way and begin to find relief from their stress-related symptoms.[13]

Often, when an unpleasant sensation arises in the body, the immediate (and unconscious) reaction is to physically tense the muscles in that area. This tension can increase the physical discomfort. Mindful attention allows individuals to discover subtle cues from the body that reveal an imbalance, or the need for a specific intervention such as a change in position or rest. The body becomes the teacher as individuals begin to identify subtle physical changes in the body that precede and accompany emotional responses.[14] This greater awareness of change, such as increased muscle tension, allows you to do what is necessary to dissipate the tension quickly.

While lying down, the person is guided to put his or her attention on a specific area of the body and tune in to what is happening there. Kabat-Zinn then has the patient *progress* to another area of the body. Patients are instructed to remain as passive and non-judgmental as possible, while at the same time maintaining a detached thought process of careful observation of body parts, both deep inside and on the surface.

Kabat-Zinn suggests that when practicing the body scan, a person should also become aware of thoughts that may arise spontaneously while focusing on a specific area of the body. As thoughts come to the surface, the person notes them but does not add to them, and does not make judgments about those thoughts. For example, if a person were doing the body scan and her attention was on her knee, a thought might arise about how the knee was struck while snow skiing. These thoughts are simply noticed but not added to or judged negatively. She would try to avoid adding thoughts about being depressed because she can’t ski anymore, or what other people think of her because she can’t spend time with them on the slopes.

Detached observation may seem difficult at first, but according to Kabat-Zinn, passively progressing through the body in this way is profoundly beneficial. By allowing the breath and the awareness to move through areas of the body, he believes the body returns to a state of balance and integrity. He refers to passive progressive relaxation as a form of mindful meditation. It has an internal focus, like methods of meditation described elsewhere in this book. Kabat-Zinn describes the ideal attitude that one should maintain while practicing passive progressive relaxation. His words apply equally to any of the relaxation techniques found in this textbook:

> In its truest expression, meditation goes beyond notions of success and failure, and this is why it is such a powerful vehicle for growth, change, and healing. This does not mean that you cannot progress in your meditation practice, nor does it mean that it is impossible to make mistakes that will reduce its value to you. A particular kind of effort is necessary in the practice of meditation, but it is not an effort of striving to achieve some special state, whether it be relaxation, freedom from pain, healing, or insight. These come naturally with practice because they are already inherent in the present moment and in every moment. Therefore, any moment is as good as any other for experiencing the presence within yourself. If you see things in this light, it makes perfect sense to take each moment as it comes and accept it as it is, seeing it clearly in its fullness, and letting it go.[13]

Stress Relief Audio File

ACTIVITY *Want to listen? This asset is only available to your instructor at the moment. Please reach out to them for file access!*

Observing, without judgment, directs healing energy to the area being observed. This concept does not always make sense to us, because we think we aren't doing anything by merely observing. But this is something you can evaluate on your own. Kabat-Zinn explains, "Each time you scan your body in this way, you can think of it or visualize it as a purification or detoxification process, a process that is promoting healing by restoring a feeling of wholeness and integrity to your body."[13]

Included on the CengageBrain website audio files is a relaxation exercise titled Flowing Comfort, designed to help you receive guided practice for this type of passive progressive relaxation.

Passive Progressive Relaxation Script: The Body Scan[13]

1. Lie on your back in a comfortable place, such as on a foam pad on the floor or your bed. This method is most effective for muscle relaxation, rather than to induce sleep. Muscles can stay in a contracted, tensed position, even during sleep, so the goal here is first to relax the muscles. A more peaceful sleep may follow. Make sure that you will be warm enough. You might want to cover yourself with a blanket.
2. Allow your eyes to close gently.
3. Feel the rising and falling of your belly with each inbreath and outbreath through the nose.
4. Take a few moments to feel your body as a "whole," from head to toe, the "envelope" of your skin, the sensations associated with touch in the places you are in contact with on the floor or the bed.
5. Bring your attention to the toes of the left foot. As you focus your attention on them, see if you can "direct," or channel, your breathing to them as well, so it feels as if you are breathing into and out from your toes. It may take a while for you to get the hang of this. It may help to imagine your breath traveling down the body from your nose into the lungs, then continuing through the abdomen, down the left leg all the way to the toes, then back again, and out through your nose.
6. Allow yourself to feel any sensations from your toes, distinguishing between them and watching the flux of sensations in this region. If you don't feel anything now, that's fine, too. Just allow yourself to feel "not feeling anything."
7. When you are ready to continue, take in a deeper, more intentional breath down to the toes, and on the outbreath allow them to "dissolve" in your "mind's eye." Stay with your breathing for a few breaths at least, and then move on to the sole of the foot, the heel, the top of the foot, and the ankle, continuing to breathe into and out from each region as you observe the sensation you are experiencing, and then letting go of it and moving on.
8. Each time you notice that your attention has wandered off, bring your mind back to your breathing and to the region you are focusing on.
9. Continue to move slowly up your left leg, your right leg, and through the rest of your body as you maintain the focus on your breath and on the feeling of the particular regions as you come to them, breathe with them, and let go of them.
10. After you have completed scanning your body, focusing on each part with as little effort as possible, return to ordinary waking consciousness by slowly arousing various parts of your body. Gently begin to move your arms and hands, your legs and feet, and your neck and shoulders, until you have revived yourself sufficiently to resume your day.

19.8 Conclusion

Many muscles in the body remain chronically contracted when they continuously receive the message from the nervous system to fight or flee. These muscles don't receive a signal from the nervous system that the threat has passed and it is now safe to relax. Active progressive muscle relaxation is a relaxation technique that reduces muscle tension by first deliberately tensing and then consciously relaxing muscles. Through conscious awareness of how muscles feel in their relaxed state, an individual becomes more aware of muscle tension when it occurs. This is a trigger to relax the muscles actively.

Passive progressive relaxation is a less active method of progressing through the various parts of the body, using a technique called the body scan. This method does not involve active contraction of muscles but, rather, passive scanning of the body. Through detached awareness and observation, individuals discover their bodies in a non-judgmental way and begin to find relief from their stress-related symptoms.

Both active and passive relaxation can be approached in many ways. Tailor your practice so it is fun and easy—and, most important, so it works for you.

Stress Relief Audio File

ACTIVITY *Want to listen? This asset is only available to your instructor at the moment. Please reach out to them for file access!*

ACTIVITY

19.1 Progressive Relaxation and Flowing Comfort

Purpose To allow you to practice deep relaxation using active or passive progressive relaxation.

Directions Prepare your environment for relaxation. Follow along with the Progressive Relaxation Stress Relief Activity instructions to practice active progressive relaxation, or the Flowing Comfort Stress Relief Activity instructions to practice passive progressive relaxation. These exercises are found in the CengageBrain website audio files. Practice either technique at least 2 times according to the instructions on the audio file. At least once, do it immediately before you sleep at night. Make sure it is the last thing you do before sleep. Do it at times when you will not be disturbed. Allow approximately 15 minutes to complete each exercise.

After completing Progressive Relaxation or Flowing Comfort, respond to the following questions. Describe how you felt about your stress levels.

Afternoon:

1. How did you feel before the exercise?
2. What was your experience during the exercise?
3. How did you feel immediately after the exercise?
4. How did you feel several hours after completing the exercise?

Right before bed:

1. How did you feel before the exercise?
2. How quickly did you fall asleep?
3. How did you sleep, and how refreshed did you feel when you awakened the following morning?
4. How did this differ from a typical night's sleep?

Classroom experience (if applicable):

1. How did you feel before the exercise?
2. What was your experience during the exercise?
3. How did you feel immediately after the exercise?
4. How did you feel several hours after completing the exercise?

Summary: After you have practiced the exercise and described your experiences, include a brief review of what you liked or did not like about this technique. Compare this technique to some of the others you have practiced. Would this be a relaxation technique you would consider regularly using for stress management? Why or why not?

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

Key Points

- Progressive muscle relaxation (PMR) is one of the most commonly used forms of relaxation therapy in Western society today.
- Many muscles in the body remain in a chronically contracted state because they continuously receive the message from the nervous system that they should contract as part of the fight-or-flight response.
- PMR involves consciously tensing and relaxing muscle groups progressively throughout the body. This reduces muscle tension.
- Adverse physical, mental, and emotional conditions associated with chronic stress can be reduced or eliminated with regular practice of PMR.
- Passive progressive relaxation is a less active method of progressing through the various parts of the body using a technique called the body scan.
- The body scan focuses on detached observation and awareness of the body.

Key Terms

progressive muscle relaxation
progressive neuromuscular relaxation
motor unit
muscle contraction
all-or-none principle
active progressive muscle relaxation
incremental muscle relaxation
passive progressive relaxation
body scan

References

1. *Weight Training for Life* (10th ed.), by J. Hesson (Belmont, CA: Wadsworth/Cengage Learning, 2012).
2. "Progressive Muscle Relaxation: A Remarkable Tool for Therapists and Patients," by P. A. Mackereth & L. Tomlinson, *Integrative Hypnotherapy,* (2010): 82–96.
3. "Insomnia: Relaxation Techniques and Sleeping Habits," IQWIG (Institute for Quality and Efficiency in Health Care), (March 9, 2017).
4. "The Effects of Music Relaxation and Muscle Relaxation Techniques on Sleep Quality and Emotional Measures among Individuals with Posttraumatic Stress Disorder," by M. Blanaru, B. Bloch, L. Vadas, et al., *Mental Illness, 4*(2) (2012): e13.
5. "The Impact of Abbreviated Progressive Muscle Relaxation on Salivary Cortisol," by L. A. Pawlow and G. E. Jones, *Biological Psychology, 60*(1) (2002): 1.
6. "Coping Strategies for Working Women: Aerobic Exercise and Relaxation Interventions," by B. C. Long & C. J. Haney, *Behavior Therapy, 19* (1988): 75–83.
7. "Progressive Muscle Relaxation Reduces Migraine Frequency and Normalizes Amplitudes of Contingent Negative Variation (CNV)," B. Meyer, A. Keller, H. G. Wöhlbier, C. H. Overath, B. Müller, & P. Kropp, *The Journal of Headache and Pain, 17* (2016): 37.
8. "Progressive Muscle Relaxation Improves Anxiety and Depression of Pulmonary Arterial Hypertension Patients," by Y. Li, R. Wang, J. Tang et al., *Evidence-based Complementary and Alternative Medicine, 2015* (2015): 792895.
9. "Investigating the Effects of the Progressive Muscle Relaxation-Guided Imagery Combination on Patients with Cancer Receiving Chemotherapy Treatment: A Systematic Review of Randomized Controlled Trials," by A. Kapogiannis, S. Tsoli, & G. Chrousos, *Explore, 14*(2) (2018): 137–143.
10. "Effect of Progressive Muscular Relaxation on Stress and Disability in Subjects with Chronic Low Back Pain," by D. Dhyana, S. Sen, & R. Raghuveer, *Journal of Nursing and Health Science, 4*(1) (2015): 40–45.
11. "Effect of Problem-Solving Therapy and Relaxation on the Severity of Postpartum Depressive Symptoms: A Randomized Controlled Trial," *Nursing and Midwifery Studies, 7*(1) (2018): 6–11.
12. "Effects of Progressive Muscle Relaxation on Blood Pressure and Psychosocial Status for Clients with Essential Hypertension in Taiwan," *Holistic Nursing Practice, 17*(1) (2003): 41–47.
13. *Full Catastrophe Living: Using the Wisdom of Your Body and Mind to Face Stress, Pain and Illness,* by J. Kabat-Zinn (New York: Dell Publishing, 1990).
14. "Mindfulness Meditation," by M. Ott, *Psychosocial Nursing and Mental Health Services, 42*(7) (2004): 23–29.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

chapter

20

Guided Imagery: Using Your Imagination

Milles Studio/Shutterstock.com

> The image is more than an idea. It is a vortex or cluster of fused ideas and is endowed with energy.
>
> —*Ezra Pound*

How does guided imagery help me relax?

Can I still practice guided imagery if I'm not a "visual" person?

How are hypnosis and guided imagery alike, and how do they differ?

Learning Objectives

Study of this chapter will enable you to do the following:

20.1 Summarize the relationship between the conscious mind and the subconscious mind.
20.2 Discuss how hypnosis relates to imagery.
20.3 Explain various uses for imagery.
20.4 Differentiate between guided imagery and visualization.
20.5 Experience relaxation guided imagery as a relaxation technique.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

Real People, Real Stories

Students Experience Guided Imagery Before my first attempt at guided imagery, I was stressed! It was the end of the semester, and I felt like I had a million school things to do, not to mention all the family/personal things that needed my attention. During the guided imagery, it felt like a sanctuary! It was nice! I felt like I was on vacation. Immediately after the exercise, I had a complete stress-level makeover; that is, until I remembered that my economics assignment was still due! An hour after the guided imagery, I was focused and able to understand my Economics 101 reading and assignment easily. This is by far a favorite stress-relieving exercise.

Before my second experience with guided imagery, I felt out of control. I swear my economics teacher is from another planet. I felt so overwhelmed and frustrated, almost to the point of tears. During the exercise, I felt relieved, although I was still anxious. As I was starting, I felt my mind and body begin to relax. I felt more centered and comfortable. I have the hardest time letting go of stress. I could still feel the anxiety lurking, but I felt calmer and better able to handle the day and any situations that might come up.

—Jamie S.

***

The first time I did guided imagery, I felt overwhelmed, stressed out, and impatient. As I tried the imagery, I became relaxed and calm. All the feelings I had before turned into peaceful, calm, relaxed feelings. I did this at night, and the next morning I woke up happy, ready for the day, and relaxed. The second time was in the morning, so I felt happy but a little nervous for the day ahead. During the exercise, I was able to relax and picture the beautiful scenery. I felt joyful afterward, and energized to proceed with my day.

—Ashley H.

20.1 Guided Imagery: Using Your Imagination

In your imagination, visualize picking up a big, ripe, juicy lemon. Imagine this bright yellow lemon, feel its texture, smell its distinct, citrusy aroma. Next, imagine taking a sharp kitchen knife, cutting the lemon into four quarters, taking 1 of those quarters, putting it into your mouth, and taking a huge, juicy bite. Imagine the sour lemon juice exploding inside your mouth as you bite into this lemon. As you imagine this clearly, notice that your mouth begins to pucker up and salivate.

Question: Why would your mouth salivate when you imagine eating a lemon if there was no actual lemon? According to researchers at the Massachusetts Institute of Technology (MIT),[1] your brain has a difficult time distinguishing between an imagined event and an event you have in your physical experience. If you imagine eating a lemon or if you eat a real lemon, your brain thinks it's a very similar experience. This research has powerful implications for stress management.

Think about what this means. You can be sitting in your room studying for a test. If you decide to clearly imagine yourself relaxing on a beautiful, tropical beach in Hawaii, your body will react as if you are really there. Reversing the scenario, you actually can be on a beautiful beach in Hawaii, and if your mind imagines all the unpleasant tasks you have to do when you get home, your body will react by activating the stress response.

In this chapter, you will learn how imagination works and how it relates to the conscious mind and the subconscious mind. You will learn how hypnosis works because of this connection. And you will learn to use guided imagery and visualization to direct the imagination in a way that will soothe the sympathetic nervous system and produce the relaxation response.

20.2 Background

Albert Einstein said, "Imagination is more important than knowledge." We often hear that knowledge is power, and the more knowledge you have, the more powerful you are. Why, then, would Einstein say that imagination is more important?

Golfer Jack Nicklaus, the winner of 73 PGA tour victories, commented, "I never hit a shot, even in practice, without this color movie: First I 'see' the ball where I want it to finish, nice and white and sitting up high on the bright green grass. Then the scene quickly changes, and I 'see' the ball going there—its path, trajectory, and shape, even its behavior on landing. Then there's a sort of fade-out, and the next scene shows me making the kind of swing that will turn the previous images into reality and only at the end of this short private Hollywood spectacular do I select a club and step up to the ball."[2]

Stephen Covey said, "All things are created twice."[3] He explained that, first, we have a mental creation—a picture in mind of what we want to create. The second creation occurs when we do the necessary things to bring into the physical dimension the image that was first established in mind.

Here's a simple example: A person begins to feel hungry. He thinks that a bowl of cereal would satisfy his hunger. This is the first (the mental) creation. Soon he finds himself filling a bowl with cereal and sitting down to eat. This is the second (the physical) creation. Nearly every action we pursue happens this way. First, we see it in our mind; then we act on that image.

When we fear or worry about something, we produce fearful images about future events. We see potentially painful outcomes happening in our imagination. These painful images activate the stress response. The imagined event is as real to the mind as the event that happens in our physical experience. So, whether you are eating a lemon, improving your golf game, or learning to relax, what you first experience in your mind affects your physical experience.

Jacob Lund/Shutterstock.com

Imagining the perfect dive.

20.3 The Mind and How It Works

Observing the act of hypnosis helps us understand how the imagination functions, and how the conscious and the subconscious mind are involved. Hypnosis is not a relaxation technique you will be practicing; however, understanding what goes on during hypnosis can help you get a clear picture of why and how guided imagery works.

> Visualization. It has been called "going to the movies" and it may be the most important part of your mental package.
>
> *—Ray Floyd, winner of the PGA, Master's, and U.S. Open golf tournaments*

Hypnosis

Hypnosis is a state of attentive, focused concentration with the suspension of some peripheral awareness. It is characterized by extreme suggestibility, relaxation, and heightened imagination. When you are under hypnosis:[4]

- Your attention is more focused.
- You are more responsive to suggestions.
- You are more open and less critical and disbelieving.

Hypnotherapists claim that hypnosis creates a state of deep relaxation and a quieter mind. When you are hypnotized, you more easily concentrate on a specific thought, memory, feeling, or sensation, while you block out distractions. You are more open than usual to suggestions.[5]

Researchers have studied patterns in the brain's cerebral cortex during hypnosis and found a decrease in left hemisphere activity. Neurologists believe that the left hemisphere is the logical control center of the brain, operating on deduction, logic, and reasoning. Under normal conditions, one's awareness remains focused on mental activity in the conscious mind. A decrease in left-hemisphere activity results in feeling less inhibited, less self-directed, and more open to suggestion.

Hypnotized subjects showed reduced activity in the left hemisphere of the cerebral cortex—the conscious mind; while activity in the right hemisphere—the subconscious mind—often increased.

FYI

Mesmerizing Idea

The father of modern hypnotism Franz Mesmer, an Austrian physician, believed hypnosis to be a mystical force flowing from the hypnotist into the subject; he called it animal magnetism. Although critics quickly dismissed the magical element of his theory, Mesmer's assumption that the power behind hypnosis came from the hypnotist and was in some way imposed upon the subject took hold for some time. Hypnosis was formerly known as mesmerism, after Mesmer, and we still use its derivative, *mesmerize*, today.

Source: *"How Hypnosis Works," by T. Harris,* How Stuff Works, *retrieved March 30, 2014, from http://science.howstuffworks.com/science-vs-myth/extrasensory-perceptions/hypnosis.htm.*

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

Scientists think that the deep relaxation and focusing exercises of hypnotism work on calming and silencing the conscious mind, so it takes a less active role in your thinking process while at the same time gaining greater access to the subconscious mind. Essentially, hypnotism opens the subconscious mind.[6] Let's explore how this works.

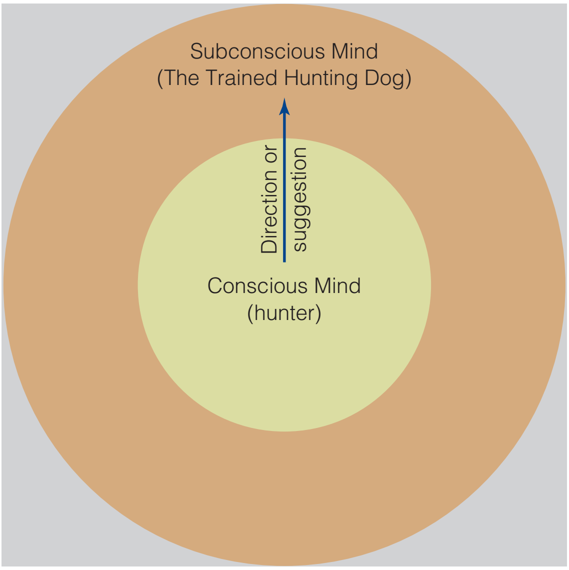


FIGURE 20.1

The hunter represents the conscious mind; the hunting dog represents the subconscious mind. Directions move from the conscious to the subconscious mind.

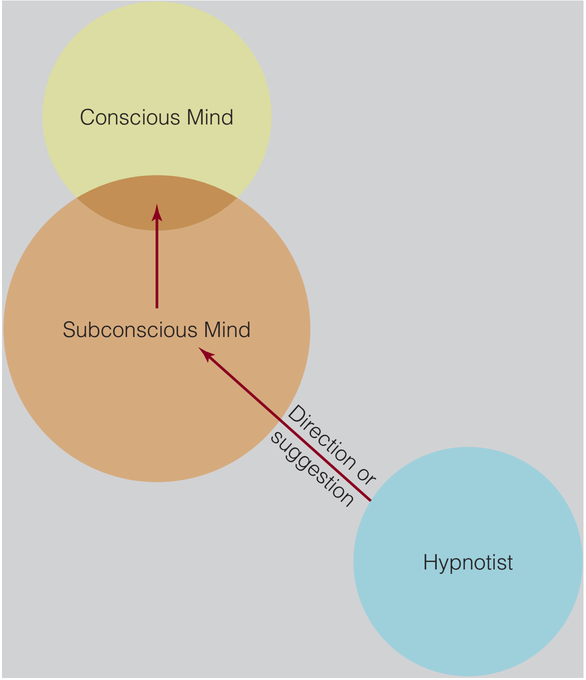


FIGURE 20.2

During hypnosis, the conscious mind takes a back seat. Suggestions are given from the hypnotist directly to the subconscious mind, which follows through on the suggestion with exactness.

The Conscious and Subconscious Mind

We can liken the two parts of our mind, the conscious and subconscious, to a bird hunter and his well-trained hunting dog. The conscious mind is like the hunter. His job is to decide which bird to shoot. If he sees a bird approaching from the distance, he recognizes what type of bird it is, determines if it is worth shooting, and gets himself ready to take his shot. The hunter continually makes decisions based on environmental conditions, and on his values and beliefs that support the successful shooting of the bird. He makes judgments such as right or wrong, good and bad, yes and no. The conscious mind is the decision-making part of our mind.

When the hunter shoots the bird, he lets his hunting dog know that it is time to retrieve the bird. He gives his dog the command, and off it goes with the single purpose of gathering up the fallen bird. The subconscious mind is like a hunting dog. He receives directions from the hunter and follows through, doing precisely what he was told to do. When the hunter says, "Go get the bird!" the dog essentially says, "Okay, I'm on my way, as you wish." He doesn't question whether the hunter's command is right or not. He doesn't second-guess the hunter. He doesn't think about the consequences of his actions. He starts on his way and moves confidently in the direction of the bird. His only job is to respond as he is directed, without any questions. Such is the relationship between the conscious and the subconscious mind. The conscious mind gives the orders; the subconscious mind carries them out. The subconscious mind is depicted as being much larger than the conscious mind (see Figure 20.1), because in addition to its role to follow through on the conscious mind's directions, it houses all the thoughts, feelings, images, and memories that we have had during our lifetime. It also harbors our beliefs, values, habits, and limitations. Most of these don't rise to our awareness in the conscious mind, but they are at work behind the scenes.

Whatever the conscious mind focuses on, believes, thinks, and directs, the subconscious mind responds to it; it follows through without question. Whereas the conscious mind has doubts, fears, reservations, and considerations about what it thinks can or can't be done, the subconscious mind simply does as it is told. If you repeatedly or with conviction say to yourself that you can't learn math, or that you are shy, or that you have any other limitation, such as a belief that you can't quit smoking, your subconscious mind simply obeys the direction given to it and says: "Oh, okay, I'll act shy" or "I'll be bad at math" or "I'll make it hard to give up this smoking addiction."

An interesting thing happens with the conscious mind when a person is hypnotized. The hypnotized person goes into an altered state where the conscious mind, which is more critical and more analytical, moves off to the side for a while and the person doing the suggesting (such as the hypnotist or hypnotherapist) directly addresses the subconscious mind (see Figure 20.2).

When the subconscious mind is spoken to directly, without the filter of the conscious mind, the subconscious follows through on the direction. It doesn't know limitations, so whatever it is told to do, it simply says, “Oh, okay, I’ll go get the bird” (or whatever it is told to do). The conscious mind is still aware to some extent during hypnosis, but it doesn’t analyze or critique the suggestions given to the subconscious mind like it usually would.

It is important to note that while suggestibility is an essential component of hypnosis, the therapist or hypnotist does not have *control* of the person. Individual motivation is necessary for successful hypnosis, and an individual will not submit to suggestions that are in opposition to his or her values.

20.4 Imagery and Visualization

What does this discussion about the conscious mind, the subconscious mind, and hypnosis have to do with visualization and relaxation? As we mentioned earlier, when we clearly imagine something, and especially when we use our imagination while we are in a relaxed state, the subconscious mind responds as if the imagined scene were really happening. We can control these imagined scenes using imagery and visualization.

Even though the terms *imagery* and *visualization* are often used interchangeably, they are slightly different. **Visualization** uses the imagination to picture or see a place or thing. The focus when visualizing is on the sense of sight. **Imagery** is an imagined flow of thoughts that includes tactile qualities from one or more of the senses. Imagery can include smell, touch, hearing, taste, position, and motion, as well as visual images.[7] *Imagery* is a broader term. The more clearly you can imagine a scene, event, or situation, and the more senses you involve, the more real it becomes to your mind.

Although imagery shares some similarities with hypnosis, it differs in several important ways. Imagery is not characterized by a lessening of the person’s own will, nor does it emphasize responding to a hypnotist’s suggestions. Imagery does not try to access unconscious materials; instead, imagery is based on memories.[8]

20.5 Uses of Imagery

Mental rehearsal can be used for several purposes.[9] For each purpose, the imagery used should feel as realistic as possible. For example, the athlete should imagine himself or herself in their uniform, on their home field or court, going through the motions of the game at game speed.

1. *Improvement of performance skills.* Mental imagery is repetitive mental practice or mental training that includes mental representation of the performance. Mental imagery is a technique that athletes can use to supplement physical practice and improve their performance in their given sport. Mental imagery seems to be better than no practice at all, but mental imagery alone is not as good as physical practice alone. Mental imagery cannot completely substitute for physical practice, and it appears as though a combination of mental imagery and physical practice leads to the most effective performance.
2. *Improvement of confidence and positive thinking.* You can do this by replaying in your mind earlier times when you performed at a high and satisfying level. For example, if you were preparing to give a speech in front of a large group of people, you could review earlier times when you gave talks successfully and let the images of those successful presentations help you build confidence for the upcoming speech.[10]
3. *Tactical rehearsal and problem-solving.* You can use this method to visualize outcomes that may arise in a given situation and decide on alternatives for handling the results. For example, imagine different scenarios for how your boss will respond to your request for a raise. Picture yourself in the situation and imagine how you would respond to questions from your boss.[10]
4. *Performance review and analysis.* Soon after completing or taking part in an event, you can use your imagination to review your performance and assess yourself for strengths to build on and weaknesses to improve.[10]
5. *Control arousal and anxiety.* Many studies show that mental imagery helps reduce stress and anxiety and increase relaxation. Most frequently, performers use imagery before a competitive event or performance rather than during or after.[9]

Even though imagery has several applications, the rest of this chapter will focus primarily on the use of imagination to control stress and anxiety. The relaxation technique for doing this is called relaxation guided imagery (RGI).

Stress Management and Peak Performance in Sports

Applying guided imagery and other mental strategies can help you relax and perform better in many settings. The goal of most athletes, as well as performers in a variety of settings, including dancing, theater, and even finance, is to operate at their peak during as much of the performance as possible. In terms of physical talent, collegiate athletes often stack up pretty evenly. So, what is it that separates those who wish they were winners from the peak performers? Most coaches and sports psychologists agree the difference is what happens in the mind of the performer, both before and during the performance.

The mental activities that separate peak performers from the rest are within everyone's capabilities. All the psychological tools that you need to perform at your peak are covered in this book. Combining them into regular practice can help any performer learn to think the way winners do. If you want to improve your performance, these 5 mental tools will help:

1. *Relax.* This first tool represents the essence of this book. The performer must learn how to relax. Relaxing doesn't mean chillin' in front of the television or hangin' out with some friends. It involves the regular practice of relaxation techniques specifically designed to turn off the stress response.

   Consider the golfer who is lining up a putt. The worry that there may be some lousy outcome if he or she misses is interpreted by the body as a threat, and the stress response activates automatically. When this happens, the running and fighting muscles tense, rather than the golfing muscles. The shot is more likely to go awry, and performance will suffer.

   Learning how to relax the mind and body through repeated practice helps prevent the onset of the stress response. The more often the performer practices relaxation techniques, the more that relaxed state becomes one's normal state. So, learning to relax is the first, and possibly most important, tool to help the athlete perform optimally. Chapters 16 through 22 of this book give you the best techniques for relaxation.
2. *Be mindful.* Stay in the moment. A successful track coach shared the advice he gives his runners to help them stay focused: "Keep your brain in your lane." Keeping your mind focused steadily on what you are doing, while keeping the mental chatter to a minimum, allows you to concentrate more fully. The chapter in this book on mindfulness offers a thorough exploration of how to do this.
3. *Monitor your self-talk.* Take the time to listen to what you consistently say to yourself during a performance. Negative messages, self-doubt, and criticism will hinder performance and turn on the stress response. Replace negative self-talk with positive affirmations such as "I have prepared well and will perform at my best. I can do this! I am calm and confident." How to control self-talk and manage your thoughts are outlined in Chapter 6.
4. *Imagine your success.* The fourth tool, guided imagery, is the focus of this chapter. Imagining clearly your perfect performance is a useful skill that prepares you to perform more closely to perfection in the actual event. Each time you imagine the ideal performance, you gain more confidence in your abilities. The subconscious part of your mind doesn't easily distinguish between an imagined event and a real one. Therefore, when you visualize your performance, it is as if you are really doing it. This instills greater confidence and reduces stress.

   Use imagery to involve as many of your senses as possible. See yourself performing correctly, but also imagine how it would feel kinesthetically. Sense how it feels to shoot the foul shot that goes through the hoop. Imagine what you might hear, smell, or taste, such as sweat mixing with your saliva or the aromas of the event. Put yourself, mentally, into the scene, and then see yourself performing flawlessly. Imagine you are watching yourself on television, or view the scene as if looking out from your own eyes. Run the mental movie over and over, and feel your confidence grow each time you succeed.
5. *Let go and get out of your own way.* The ability to perform physically is already an attribute of the advanced athlete. Most successful athletes will tell you that once their physical training has been optimized, their top performances come by letting go and allowing the process of playing to happen through them, rather than deliberating about how it should happen. This higher level of functioning is described as "being in the zone," or being "in the flow" of the game. At this stage, the athlete doesn't need to think about the "how" of

doing the sport. The physical tools are already in place. Letting go involves letting those skills go to work on their own, without letting thoughts about how it's done get in the way. This cannot be forced or coerced. We shouldn't "try" to make it happen; in fact, it seems to happen when we are least "trying" to make it happen. By applying these 5 mental skills to your pre-performance time, as well as during the action, you dramatically increase the likelihood of experiencing these peak moments when playing and performing are the most enjoyable.

Robert Daly/OJO Images/Getty Images

Athletes use principles of stress management to help them perform at their peak.

20.6 Relaxation Guided Imagery: What Is It?

Relaxation guided imagery (RGI) is a technique used to connect with the subconscious mind in a way that will activate the relaxation response. Guided imagery focuses the imagination on a relaxing image, scene, or sensation. This relaxing imagery decreases sympathetic nervous system activity and activates parasympathetic nervous system activity resulting in a reduction in the fight-or-flight response.

Guided imagery is like hypnosis in that what we imagine can be translated into changes in our physiology, biochemistry, and, as a result, our health outcomes. Because the subconscious mind doesn't know the difference between something experienced and something clearly imagined, it can be used to help a person deeply relax. When our mind thinks of something or somewhere relaxing, the subconscious mind automatically responds as if we were really in that place. Inherent in relaxing guided imagery is a lack of any threat. Because there is no threat, the body relaxes and returns to a state of homeostasis.

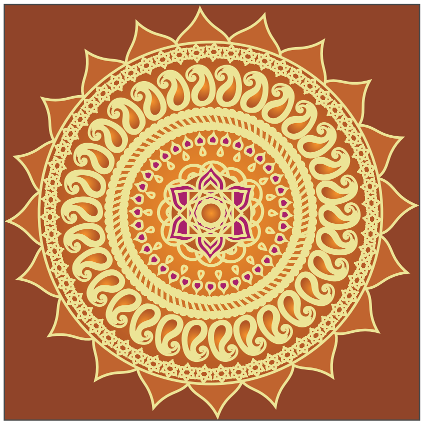
20.7 Benefits of Guided Imagery

Athletes, performers, businesspeople, inventors,[11] and even people who try to overcome various illnesses[12] have used the imagination to help them produce desired outcomes. Guided imagery also has helped treat many stress-related symptoms, including headaches, muscle spasms, chronic pain, and general or situation-specific anxiety.[13]

CULTURE CONNECTION Seeing Sacred Symbols

Visualizing sacred symbols is a spiritual ritual used in many cultures. Hindus and Buddhists use a *mandala*, a graphic representation depicting the universe. Sacred symbols can help individuals connect with their deep subconscious awareness and create a meditative state.

Source: *Spirituality, Health, and Healing*, by C. Young & C. Koopsen (Thorofare, NJ: Slack Inc., 2005).


BibiDesign/Shutterstock.com

Visualizing sacred symbols such as a mandala can help individuals create a meditative state.

STRESS STUDIES

Guided Imagery for Youngsters with Asthma

Asthma is a common disease of the respiratory system, especially among younger people in our culture. Asthmatics have difficulty breathing because the bronchial airways are temporarily blocked due to constriction of the muscles surrounding the airways. A person with asthma doesn't struggle with inhaling but, instead, has a tough time exhaling. Asthma often is triggered by emotional distress.

A study reported in the journal *Psychology in Schools* examined the effectiveness of guided imagery as a way of reducing stress and the severity of an asthma attack in young people with asthma. Junior high students who had been diagnosed with asthma were selected for the study. Each subject experienced mild to severe levels of asthma when upset.

In the study, which lasted 8 weeks, the students were taught relaxation guided imagery (RGI), which involved a specific script incorporating (1) general relaxation exercises (i.e., letting the tension go in each part of the body and imagining being in a pleasant, peaceful place); (2) guided imagery in which the participant imagines specific biological healing mechanisms in the bronchial tubes and lungs; (3) instructions to imagine doing a favorite activity during which the participant has no problems with his or her asthma; and (4) guided imagery in which the participant visualizes breathing in uniquely colored air that completely clears the airways and lungs.

Students engaged in the RGI exercises for 20 minutes for an average of 4 times per week. At the end of the study, each subject reported a noticeable decrease in feelings of anxiety, which tend to trigger asthma attacks. The overall results suggest that RGI is a promising intervention in treating children with asthma as an adjunct to medical intervention.

Source: *"Relaxation and Guided Imagery as an Intervention for Children with Asthma: A Replication," by R. L. Dobson, M. A. Bray, T. J. Kehle, L. A. Theodore, & H. L. Peck,* Psychology in the Schools, 40*(7) (2005): 707–720.*

O. Carl Simonton and Stephanie Simonton pioneered the application of imagery in cancer patients. Their patients were encouraged to imagine their immune system cells engulfing and devouring vulnerable cancer cells. Although a definitive study that demonstrates whether this works has not happened, many patients found it helpful, even if they were not cured, and reported relief from anxiety and pain, better toleration of chemotherapy and radiation, and an increased sense of control.[7]

Guided imagery is especially useful in producing deep relaxation in those who practice it regularly. RGI is another powerful way to provide quick and noticeable relaxation. Don't take it lightly because of its simplicity!

20.8 Guided Imagery as a Technique for Relaxation

When guided imagery is used as a method for relaxing, it usually is best done lying on a couch or bed or sitting up in a chair. Environmental conditions that enhance the effects of guided imagery are similar to the other relaxation techniques: It should be done in a place where you won't be disturbed and where the lights can be turned down. Sometimes using relaxing music is helpful. It is important to feel comfortably warm. Have a blanket ready to cover you in case of a chill.

Because the imagination is unlimited, there is no end to the things you can imagine to achieve a relaxed state. A typical RGI session begins with a brief relaxation exercise such as meditation, relaxing breathing, a body scan, or progressive relaxation. After two or three minutes relaxing the mind and body, you start using your imagination.

Some common and simple images that can help you turn off the stress response include walking along the beach with gentle ocean waves caressing your legs and feet, walking peacefully through a forest, being in the mountains or by a tranquil lake, or sitting by a running river. You can picture yourself drifting slowly down a lazy stream, seated atop a silent peak overlooking a majestic view, or resting in the stillness of a quiet field. There is something profoundly relaxing about seeing ourselves in peaceful places in nature. You can experiment until you find the most tranquil, relaxing place you can imagine.

Although some people see a relaxing setting when using RGI, for others it will be more elusive and more like a general impression of relaxation. Shakti Gawain, the author of the book *Creative Visualization*, suggests:

> Don't get stuck on the term "visualize." It is not at all necessary to mentally see an image. Some people say they see clear, sharp images when they close their eyes and imagine something. Others feel that they don't really "see" anything, they just sort of "think about" it or imagine that they are looking at it or become aware of a feeling impression. That's perfectly fine. We all use our imaginations constantly; it's impossible not to, so whatever process you find yourself doing when you imagine is fine.[14]

To enhance your relaxation experience even more, increase the amount of sensory information you put into your imagination. For example, as you walk along the beach, add the colors of the blue sky with puffy white clouds overhead. You might add the sounds of gulls, the feel and sound of a gentle breeze, and the feel of soft, grainy sand under your feet as you walk. The more senses you involve in the imagery, the more powerful the effect—the more you will feel like you are there. By thoroughly using your senses in your imagination and imagining scenes that are pleasant and relaxing, you quickly bring feelings of deep relaxation into your mind and body.

Guided imagery typically is done by having someone read a script or by using a recording that directs your imagination through a relaxing situation or scene. You will find some examples of guided imagery at the CengageBrain website audio files. You may want to freely use your imagination on your own to create the imagined scene.

Suggestions for Improving Guided Imagery Practice

One's ability to access all the senses for imagery practice will vary, depending on his or her preferred and most easily used sensory expression and motivation. It will also depend on each person's natural and innate ability to *imagine*. If you are one of those individuals who lack a vivid imagination, don't be discouraged. Research has found one key factor in imagery success in people with less vivid imaginations. Strong motivation to engage in imagery can produce some benefits even in individuals with limited abilities to imagine.[15]

Here are some tips to help a positive outcome with guided imagery:

- Think in terms of the unlimited—no limits, no barriers in your imagination. If you want to fly in your imagination, you are free to fly. If you can imagine it, anything is possible.
- Release all thoughts of what others might think. There are no "others" in your imagination, so don't be shy. Act boldly and freely.
- Include relaxing music in the background, such as classical or New Age music without lyrics.
- Be playful. Don't be too serious when you play in your imagination. The harder you try, the harder it will be to "view" your imageries well.

A Simple Guided Imagery Script

Here is a simple guided imagery script for you to practice. Ask someone to read the script while you relax and experience guided imagery.

Lie down with your arms resting comfortably at your sides. Separate your feet and turn them slightly out. Make yourself as comfortable as possible. Gently close your eyes. Take in a nice, natural, deep breath through your nose . . . And exhale out your nose. Again, a deep breath in . . . and exhale. Continue to breathe deeply in and out. (long pause)

Allow all thoughts of your past and future to drift away. Bring yourself fully to this moment. Be patient with yourself as you visualize. Don't try too hard. If the scenes don't appear immediately in your imagination, try to sense the image, but don't force it.

Now, with your eyes closed, picture in your imagination a beautiful mountain scene. Imagine that you are in the mountain scene and that you are enjoying the beauty and peace of this beautiful place. It is one of the most beautiful places you have ever seen. Picture the towering majestic mountains reaching up to the blue sky. Notice a few puffy, white clouds overhead and some clouds at the peaks of the highest mountains in view. (pause)

At the base of these mountains is a vast forest of trees. This forest is rich with deep greens and browns. You notice the trees sway gently in the breeze. Feel the warm sun as it lands on your arms and face. This place is so peaceful and serene. Experience this place fully in your imagination. (pause)

Shortly, you notice a path that moves toward this forest. Step on the trail and begin walking toward this grove of trees. Smell the fragrances of this forest as you reach the trees along this path. Breathe deeply and fill your lungs with the forest smells. (pause)

As you walk along this path, you notice, through the trees, a clearing up ahead. This clearing opens to a majestic view of a large, sandy beach and the ocean extending as far in the distance as your eyes can see. Look around and notice the variety of colors you see all around you . . . the color of the sand, the sky, the ocean. (pause)

See yourself moving toward this sandy beach. Soon you begin walking barefoot in the sand, and you notice that the sand is warm and soft. With each step, your feet feel more comfortable. Everything is perfect here. You feel safe and secure. The only sound you can hear is the gentle surf as it moves toward you and then away again like the ocean breathing in and out. Stop and gaze out at this majestic ocean. Notice how completely relaxing

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

this ocean appears. It is so peaceful and stable. Enjoy this perfect place for a few moments. Take in the warmth of the sun and the serenity of this magnificent ocean. You are peaceful, warm, and calm. Nothing can disturb this peaceful feeling. (pause)

Imagine sitting down at a perfect place in the sand, closing your eyes and just listening . . . feeling the peacefulness . . . the restfulness of this place. Imagine yourself lying down in a comfortable position . . . and letting go of your worries and tensions . . . and relaxing . . . Imagine the warmth of the sun and the cool breeze playing on your face . . . as you relax . . . and breathe quietly in . . . and out . . . (pause)

Listen to the quiet sounds around you . . . feel the sun on your skin, warming you, soothing away all tensions and cares . . . feel the breeze playing on your skin . . . This place is so restful, so full of peace . . . Let the faint smells and silence of this marvelous place gently relax you. (pause)

Breathe in gently and deeply and relax. Your body is rested and at peace . . . You draw strength and energy from the sunlight . . . As you breathe in, the energy fills you . . . Your lungs are filled with oxygen that spreads nourishing and healing energy to every part of your body. As you inhale this pure fresh ocean air, visualize this healing energy spread through your entire body. You feel completely at peace, rested and content. Enjoy these feelings as you relax in the miracle of your place by the ocean. (pause)

Now, with a comfortable breath, remind yourself that you can easily return to this relaxing place to bathe in the stillness. Thoroughly enjoy this feeling of deep relaxation. Allow yourself to be still and rested . . . (long pause)

Now prepare to end this session. When you return to ordinary waking consciousness, you will feel relaxed, alert, refreshed, wide awake, and energized. (return slowly)

20.9 Conclusion

The imagination has a powerful impact on the body and mind. Guided imagery works in a manner like hypnosis to connect directly with the subconscious mind in such a way that your body responds directly to what you are imagining. Relaxation guided imagery is a technique that you can use to calm your body and mind by suppressing the sympathetic nervous system and creating homeostasis.

If you can imagine yourself relaxing on the beach in Hawaii with a refreshing breeze blowing in from the ocean, you can activate the relaxation response just as if you were on the beach relaxing. It can work both ways: If you are on the beach in Hawaii and your mind imagines all the problems and work you left at home, your body will respond as if you are at home dealing with the stresses. The stress response will be activated.

Truly relaxing and taking time away from work and school responsibilities are valuable to restore us mentally and physically. Maybe you can't make a trip to Hawaii, but you can take 20 minutes to imagine you are there! Your body and mind will appreciate the break.

Stress Relief Audio File

ACTIVITY *Want to listen? This asset is only available to your instructor at the moment. Please reach out to them for file access!*

ACTIVITY

20.1 Guided Imagery

Purpose To allow you to practice deep relaxation using guided imagery.

Directions Prepare your environment for relaxation. Follow along with the guided imagery instructions found in the CengageBrain website audio file. You can select the Guided Imagery—Mountain Lake or the Guided Imagery—Floating through Colors exercise. You may want to try them both. Practice the technique at least twice according to the instructions on the audio file. This exercise is best done sitting in a comfortable position rather than lying down. It is not one that is used to help you fall asleep so much as it is used to relax you deeply while still being conscious. Allow approximately 15 minutes to complete the exercise.

After completing guided imagery, respond to the following questions. Describe primarily how you felt in relation to your stress levels.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

First practice:

1. How did you feel before the exercise?
2. What was your experience during the exercise?
3. How did you feel immediately after the exercise?
4. How did you feel several hours after completing the exercise?

Second practice:

1. How did you feel before the exercise?
2. What was your experience during the exercise?
3. How did you feel immediately after the exercise?
4. How did you feel several hours after completing the exercise?

Classroom experience (if applicable):

1. How did you feel before the exercise?
2. What was your experience during the exercise?
3. How did you feel immediately after the exercise?
4. How did you feel several hours after completing the exercise?

Summary: After you have practiced the exercise and described your experiences, include a brief review of what you liked and did not like about this technique. Compare this technique to others you have practiced. Would this be a relaxation technique you would consider using regularly for stress management? Why or why not?

Key Points

- Imagery is a flow of thoughts that encompasses sensory qualities from one or more of the senses.
- Visualization relates more specifically to using the imagination to picture or see a place or thing.
- Guided imagery works in a manner like hypnosis to connect directly with the subconscious mind in such a way that the body responds directly to what you are imagining.
- Relaxation guided imagery is a technique that can activate the relaxation response.

Key Terms

hypnosis
imagery
relaxation guided imagery (RGI)
visualization

References

1. "Mental Imagery of Faces and Places Activates Corresponding Stimulus-Specific Brain Regions," by N. Kanwisher & K. O'Craven, *Journal of Cognitive Neuroscience, 12*(6) (2000): 1023–1034.
2. *Golf My Way,* by J. Nicklaus (New York: Fireside, 1974).
3. *Seven Habits of Highly Effective People,* by S. Covey (New York: Fireside, 1989).
4. "Hypnosis: Definition" Mayo Clinic staff, retrieved April 1, 2014, from http://www.mayoclinic.org/tests-procedures/hypnosis/basics/definition/prc-20019177.
5. "Tests and Procedures: Hypnosis" Mayo Clinic staff, retrieved April 1, 2014, from http://www.mayoclinic.org/tests-procedures/hypnosis/basics/definition/prc-20019177.

6. “How Hypnosis Works,” by T. Harris, *How Stuff Works,* retrieved March 30, 2014, from http://science.howstuffworks.com/science-vs-myth/extrasensory-perceptions/hypnosis.htm.
7. *The Best Alternative Medicine: What Works? What Does Not?* by K. Pelletier (New York: Simon & Schuster, 2000).
8. *Complementary and Alternative Medicine: A Research-Based Approach,* by L. Freeman (St. Louis: Mosby, 2009). “Mental Imagery,” *Physiopedia,* retrieved on December 7, 2019, from https://www.physio-pedia.com/Mental_Imagery.
9. *The Mental Game Plan: Getting Psyched for Sport,* by S. J. Bull, J. G. Albinson, & C. J. Shambrok (Cheltenham, UK: Sports Dynamics, 1996).
10. *Superlearning,* by S. Ostrander & L. Schroeder (New York: Dell Publishing Corp., 1979).
11. “Can Visualization Techniques Treat Serious Diseases? The Amazing Power of the Mind-Body Connection and Psychoneuroimmunology (PNI),” by C. N. Lazarus, *Psychology Today* (January 26, 2016), retrieved from https://www.psychologytoday.com/.
12. *The Relaxation and Stress Reduction Workbook,* by M. Davis, E. R. Eshelman, & M. McKay (Oakland, CA: New Harbinger Publications, 1988).
13. *Creative Visualization,* by S. Gawain (New York: Bantam Books, 1985).
14. *Complementary & Alternative Medicine: A Research-Based Approach* (3rd ed.) by L. Freeman (St. Louis, MO: Mosby, 2009).

chapter

21

Meditation

Buero Monaco/The Image Bank/Getty Images

> Meditation is not a way of making your mind quiet. It's a way of entering into the quiet that's already here—buried under the 50,000 thoughts the average person thinks every day.
>
> —*Deepak Chopra*

If I concentrate really hard on something, am I meditating?

What is a mantra?

If I fall asleep during meditation, will I get the same benefits?

When is the best time to meditate?

Is it possible to clear my mind of all thoughts?

Learning Objectives

Study of this chapter will enable you to do the following:

21.1 Explain the 4 elements necessary for mantra meditation.

21.2 Distinguish between various forms of meditation.

21.3 List the benefits of meditation.

21.4 Participate in and experience the relaxing benefits of meditation.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

Real People, Real Stories

Student Meditation When we were first given the assignment to meditate, I was skeptical about doing it. I thought it was going to be some weird hippie thing that you see in movies, but I soon found out that I was wrong. The first time I tried the exercise, I was surprised at how easy it was. I thought for sure that it was going to be hard for me to get into, but my mind eased right into the mantra, and I found myself relaxing with no trouble. The word that I chose to use was love. By the end of the exercise, my mind felt lighter (for lack of better description). It was almost like I was somewhere else looking at myself on the outside. I was so excited about trying meditation again that I did it every day this week. One day I had a horrible headache and didn't feel like meditating, but I had committed myself to do it anyway. As I concentrated on my word (love), I found that I wasn't thinking of my headache anymore. By the end of my meditation, my headache was completely gone.

I am still amazed that something that simple got rid of my headache, especially since medication usually doesn't even make a dent in the pain. So now I'm hooked. I've put time in my planner to meditate at least 3 days a week, and I hope I can do more. I've developed some relaxing exercises over the semester, but this is the easiest and the best I've experienced. So, I guess you can say that I'm hooked on the "weird hippie stuff" that I had always been skeptical of!

—*Peter B.*

***

I tried meditating early in the morning. Before I began, I felt quite tired. Though I was tired, my mind was focused, and I was able to maintain the mantra well. While I was meditating, I noticed a sense of peace wash over me, and my body along with my mind, became completely calm. I felt present in the moment and relaxed in every way. After I was done, I felt focused and ready to face the day. I had a burst of energy that lasted throughout the day, along with a balanced mindset. I noticed that meditating works best for me in the morning when my mind is calm and my body needs energy. It was overall an effective and relaxing experience that helped me prevent the future stress of the day.

—*Lauren B.*

21.1 Meditation: It's Not What You Think

What images come to your mind when you think of the word *meditation*? Perhaps you think of a Tibetan monk or an Indian guru sitting in the **lotus position** (cross-legged, with each foot resting on the other thigh) with hands resting on knees, forefingers touching thumbs, eyes closed, repeating what sounds like the word *hum* again and again.

You probably have heard people say that meditation is merely focusing the mind on a specific image. Others say it is like daydreaming or doing guided imagery. Meditation has also been equated with prayer. Many people are suspicious of meditation, because they don't quite know what it is. One thing we do know is that meditation has blossomed into many forms that have been practiced by many cultures throughout the centuries. People around the world incorporate some variation of this powerful relaxation technique into their daily routine.

Meditation is becoming increasingly popular for use in everyday life as we find ourselves more and more distracted and disrupted by endless interruptions and stressors. Meditation is gaining new respect among those who study the brain, and it has become a highly praised therapeutic tool. This ancient spiritual practice is finding new uses as both a stress-management technique and in the treatment of mental and physical disorders.

21.2 Meditation: What Is It?

Meditation is a conscious method of systematically allowing the mind to focus gently on a single item. In the process, the mind tends to think more clearly as the mental chatter quiets. The result is a mental state of alert relaxation. When you clear the clutter from your mind, your mind and body settle naturally into a state of balance or homeostasis. Through focus and passive concentration, your mind opens to new perspectives and self-awareness. The calming mental exercises of meditation are a proven remedy to stress and tension.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

Of the many ways to meditate, nearly all have these common components:

- A quiet environment with minimal distractions
- A comfortable, relaxed position, usually sitting
- A point of mental focus

Meditation means different things to different people. Meditation may simply mean prayer or contemplation while focusing your mind on a single thought or idea; on an object such as a flower; or on a simple shape, sound, or image. People have been known to meditate with their eyes wide open while continuously focusing on the flame of a candle or on a single point on a wall or ceiling. People can meditate with their eyes half-open, with eyes barely open to let in just a sliver of light; or they may meditate with their eyes completely shut. In this chapter, you will learn about several different meditation techniques. As you experiment with them, you will discover which work is best for you.

Mike Powell/The Image Bank/Getty Images

The lotus position is often associated with meditation.

Many books, articles, and websites describe meditation as a means for creating enlightenment, for developing one's inner energies, and for reaching transcendental awakening. These and other uses of meditation may be interesting and useful, and you may want to explore these more fully on your own. The scope of meditation as it is discussed in this text is limited to its uses as a powerful, effective method for preventing and reducing chronic stress and the disorders associated with it.

STRESS STORIES

My Introduction to Meditation

Many years ago, I worked in a city public library. Nearly hidden among other books on health and wellness, I noticed a section of books on meditation. Not knowing anything about meditation at the time, I was intrigued as I read some of the claims.

Meditators experienced slower brainwave activity, lower resting heart rate, and a reversal of the aging process. They felt more alive and alert all day long, and saw many other health-related improvements. I was especially interested in the reports of meditators normalizing blood pressure because I was diagnosed with high blood pressure and was told by my doctor that I would need to take blood pressure medication for the rest of my life.

I was eager to learn transcendental meditation (TM), but one challenge seemed too big for me as a young, poor, working college student: The price tag to learn TM was $500. (It costs much more than that to learn TM today.) That seemed pricey, but I eagerly wanted to learn to meditate, so I went to the introductory presentation, scraped together the necessary cash, and signed up.

A week later, I found myself in a room with the same man who had given the presentation the previous week. I was excited, yet still a bit skeptical. In this room, incense was burning, rose petals were strewn everywhere, and pictures of men I had never seen were displayed around the room. Music that sounded like it came from the movie *Gandhi* was playing lightly in the background.

The man asked me to sit down. We talked for a few moments, and he asked me to remain quiet while he began speaking in another language that sounded like a prayer of some kind. I didn't recognize it, and I thought the whole thing was a bit strange. I thought that I had come to learn how to meditate, not to convert to some Far Eastern religion.

Toward the end of this prayer, he began saying a specific word slowly and repeatedly. I didn't recognize the word, nor did I have any idea what it meant. He told me to start repeating it with him quietly aloud to myself. His voice grew quieter, and he prompted me to continue repeating the word. Not knowing any better, I did just what he said to do. He prompted me to begin saying the word more quietly to myself until, at some point, he directed me to repeat the word silently to myself. Soon, he told me to close my eyes and continue whispering the word to myself without vocalizing it. I did this for about 15 minutes when he instructed me to stop repeating the word and slowly open my eyes.

When I was through, I was astonished by how different I felt. I felt amazingly peaceful and content—like I had never felt before. I felt like I had slept for 16 hours. It felt like my mind was "cleaner" than it had ever been. This was wonderful! I had gotten my money's worth and more! I didn't understand it in the least, but I felt terrific!

For more than 3 decades, I have continued to meditate the same way I did that first time (without all the mystical elements of that first evening), and the effects are always dramatic. I have more energy. I feel more alive, more alert, and more easily able to focus on everything I do. Few things have had a more significant impact on my sense of well-being than meditation.

—MO

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

21.3 What Meditation Is Not

Thoughts about meditation might conjure up images of a person who can make the mind become entirely still to a point at which no thinking happens. Let's consider the possibility that meditation is the process of removing all thoughts and creating a perfectly still mind.

Take a moment to try this little experiment. Close your eyes, and for about 30 to 60 seconds, try to create a still mind. Try to eliminate every thought in your mind. Use as much effort as possible, and use any method that you can think of to make your mind go completely blank. Do this now.

What did you discover? Did you find this was easy or difficult? Most people who try this say that it was even harder to create a still mind by thinking about making it happen. As you were trying to silence your mind, you probably noticed thoughts popping in and out of your head at lightning speed, coming from nowhere into your awareness, leading to other thoughts, which led to still other thoughts, and so on. As hard as you try, you notice that it is virtually impossible to force your mind to become blank.

A favorite example is the impossible demand, "Don't think about a white bear." The harder we try not to think of something, the more it stays in our mind. The harder we try to empty our mind, the more it fills with thoughts. Trying to empty your mind in any determined way is not meditation. The result of this thinking process can hardly be considered peaceful.

21.4 Meditation Put into Practice

We are told that meditation is good for us—that it relaxes, heals, stills the mind, and brings enlightenment. So how can you learn and practice meditation in your daily life? As you read in Real People, Real Stories, meditation does not take years of practice, nor does it involve venturing off to some spiritually enlightened sage who lives in the Himalayas. It also does not include forceful attempts to still the mind. To get started, try these 2 easy-to-learn techniques: mantra meditation and breathing meditation.

Mantra Meditation

Of the many ways to meditate, there is no evidence that 1 type of meditation is far better than the rest. Based on years of research on the physiology of meditation, Herbert Benson of Harvard Medical School found that any meditation practice could produce the relaxing physiological changes known as the relaxation response as long as 4 factors were present:[1]

1. A mental device (the constant and repetitive focus of attention).
2. A passive attitude.
3. Decreased muscle tone facilitated by a comfortable position.
4. A quiet environment.

Mantra meditation is a technique that combines these 4 factors. Let's look in-depth at each element of meditation.

Mental Device Meditation involves focusing the mind on a single item. One common mental device that facilitates this is a **mantra,** which is simply a repeated word, sound, or phrase used as a point of focus during meditation. *Mantra* comes from the Sanskrit words for mind (*man*) and sound (*tra*). Mentally repeating a word or phrase promotes an extremely mindful mental state.

Mantra meditation is easy to learn and simple to put into practice. Begin by choosing your mantra—one that is easy to remember and has associations that are relaxing. Some people prefer one–or two-syllable words such as *one, peace, still, love, now, serene, peaceful, success, soothe, happy, calm,* or *relax*. Others prefer a phrase such as, *I feel calm* or *I am peaceful*.

Once you have selected your mantra, find a quiet place where you will not be disturbed, turn down the lights, sit in a comfortable chair, close your eyes, and focus inwardly on your breath and bodily sensations for about 30 seconds. Once you are settled in, begin reciting your mantra silently to yourself at a pace of about 1 repetition of the word about every 2 or 3 seconds: for example, "One . . . one . . . one . . . one . . . one . . . one . . . one . . . one . . . one . . .

one . . . one . . . one . . . one . . . one . . . one . . . one . . . one . . . one . . ." Repeat the mantra slowly and passively. That's all there is to it. The only effort you make is the intention of silently repeating the mantra. As other thoughts come and go, allow the gentle repetition of your mantra to be the focus. Do this for as long as you feel is right for you. A good amount of time to meditate is between 10 and 20 minutes.

Passive Attitude When you meditate, exert as little effort as possible. Working at meditation doesn't help. You should not try to make anything happen. Relax, focus, and let it happen. This may seem contrary to the way you have done most things in your life. Most of us have been taught that we need to work hard to do anything significant. Meditation is different. When you meditate, you should have only one intention: the simple act of repeating the mantra, when it occurs to you to do so, with as little effort as possible. Do not try to do anything else, or try to make anything else happen. The attitude that works best for meditation, and most of the relaxation exercises discussed in this book, is called effortless effort.

Comfortable Position Meditation begins by sitting in a comfortable position. You may choose to sit on the floor, in a chair with a straight back, in the lotus position, or any other seated position that is comfortable to you. Try to sit up comfortably straight. Jon Kabat-Zinn suggests that sitting for meditation is different from simply sitting down casually. He describes this as "sitting with dignity."[2]

To avoid falling asleep while meditating, you probably should not meditate lying down. When you meditate, you commonly go into levels of deep rest with altered brainwave activity, yet you usually stay awake and aware. It is as if you are resting deeply but not sleeping. Meditation is not sleeping, and the benefits are different. You do not want to associate meditation with sleeping, which is what you will likely do when you lie down.

Quiet Environment Finding a place where you will not be disturbed is beneficial. Set your chair in a closet, or in a room where you know the phone will not ring and no one will interrupt you. Many people find it beneficial to select a particular place for their daily meditation routine. Though not a requirement, it is recommended that the lights be turned down or off. To avoid visual distractions and enhance concentration, the best results are achieved by meditating with the eyes closed.

These are the ideal conditions, but with time, people have been known to practice this type of meditation almost anywhere, including in airports, cars, boring classes (although we are not recommending that you do!), by the ocean, or on mountaintops. The effects are still the same. Environmental noises should not be considered a hindrance to meditation, but should be treated the same as your internal thoughts. Simply let them happen and gently return to your mantra when it occurs to you to do so.

Ending Meditation To achieve the greatest benefit, you should end your meditation correctly. Have you ever been asleep and in the middle of a dream when suddenly the phone rang, and you awakened abruptly? When this happens, you may feel out of balance and irritated. While meditating, you will achieve a level of restfulness like that during deep sleep. You *do not* want to come out of meditation quickly. End meditation by returning slowly to ordinary consciousness. Give yourself 2 or 3 full minutes to quietly sit in your chair, enjoying the peacefulness of the experience. This may sound trivial, but it is crucial. Take your time as you return. *Don't be in a rush to end your meditation sessions!*

Mantra Meditation: Putting It All Together You are now ready to put it all together by following these simple steps:

1. Sit with dignity and close your eyes.
2. Repeat your mantra.

FYI

The Faith Factor

In recent years, Herbert Benson's research has yielded some new insights into the mantra. He found that a word or phrase associated with one's faith or beliefs brings even more excellent results. Benson calls this the **faith factor**—believing that power is added when one combines the quieting effect of meditation with the power of one's beliefs.[3] This faith factor seems to improve people's success in staying with their practice of meditation and incorporating meditation into their daily routine over time.

STRESS STUDIES

Magical Mantra?

Does everyone have a specific "right" mantra? Herbert Benson and others at Harvard did some interesting studies on **transcendental meditation** (TM). TM is unique in that it involves going into a meditative state by repeating a unique, individualized mantra—a Sanskrit sound without meaning. The researchers wanted to know if the study participants could realize the same effects by using words other than those given to them by the trainers of TM. They wanted to know if there is something unique about the individualized mantra that is necessary for successful meditation.

The researchers determined that it doesn't matter what word or phrase you repeat. They found that focusing on and repeating a sound was the crucial element. It appears that the positive benefits of meditation can be achieved without any of the Eastern, mystical features associated with TM.

Source: The Relaxation Response, *by H. Benson (New York: Morrow Books, 1975).*

3. When your mind wanders, return your focus to passively repeating your mantra.
4. Do not be in a hurry to end your meditation, regardless of its duration.
5. Enjoy the benefits of profound relaxation.

Dean Mitchell/Shutterstock.com

Meditation is commonly practiced while sitting in a chair.

Breathing Meditation

Mantra meditation is 1 type of meditation. Another enjoyable type of meditation for you to try is **breathing meditation.** This form of meditation is traced back to Buddha, from *Buddha's Little Instruction Book*.[4]

To begin breathing meditation, select a quiet time and place. Be seated on a cushion or chair, taking an erect yet relaxed posture. Sit upright with the quiet dignity of a king or queen. Close your eyes and gently bring your full, present attention to whatever you feel within you and around you. Let your mind be spacious, and your heart be kind and soft.

As you sit, feel the sensations of your body. Then notice any sounds and feelings, thoughts, and expectations. Allow them all to come and go, to rise and fall like the waves of the ocean. Be aware of the waves and rest seated in the midst of them. Allow yourself to become more and more still.

In the center of all these waves, feel your breathing, your life breath. Let your attention feel the in-and-out breathing wherever you notice it, as coolness or tingling in the nose or throat, or as a rising and falling of your chest or abdomen. Relax and softly rest your attention on each breath, feeling the movement in a steady, natural way. Allow the breaths to follow any rhythm, long or short, soft or deep. As you explore each breath, focus on and settle into its movement. Let all other sounds, sensations, thoughts, and feelings continue to come and go like waves in the background.

After a few breaths, your attention may be carried away by waves of thoughts or memories, body sensations, or sounds. Whenever you notice you have been carried away for a time, acknowledge the wave that has done so by softly giving it a name such as "planning," "remembering," "itching," and "restless." Then let it pass and gently return to the breath. Some waves will take a long time to pass, and others will be short. Certain thoughts or feelings will be painful, and others will be pleasurable. Whatever they are, let them be.

At some sittings, you will be able to return to your breath easily. At other times in your meditation, you will be aware mostly of body sensations or of plans or thoughts. Either way is fine. No matter what you experience, be aware of it, let it come and go, and rest at ease in the midst of it all. After you have been sitting for 20 or 30 minutes in this way, open your eyes and look around you before you get up. Then, as you move, try to allow the same spirit of awareness to go with you into the activities of your day. In this type of meditation, the focus is primarily on the breath rather than a mantra. The mind is trying neither to forcibly think a certain way, nor to inhibit thoughts from coming and going.

STRESS STUDIES

Meditation for Stress, Depression, and Burnout

Workplace stress and burnout are pervasive problems affecting employee performance and personal health. Researchers looked at the effectiveness of transcendental meditation (TM) on psychological distress, depression, and burnout among staff at a residential therapeutic school for students with severe behavioral problems.

In this study, 40 schoolteachers and support staff were randomly assigned to a group that learned and practiced TM or a wait-list control group. The participants were assessed at the beginning of the study for stress, depression, and burnout.

After 4 months of regular meditation, compared to the control group, the TM group had significant reductions in perceived stress, depression, and overall teacher burnout. Of the 3 outcome variables, meditation had the most substantial effect on perceived stress. These results support other research suggesting that meditation would be a helpful addition to any stressful working environment.

Source: *"Effect of Transcendental Meditation on Employee Stress, Depression, and Burnout: A Randomized Controlled Study," by C. Elder, S. Nidich, F. Moriarty, & R. Nidich.* The Permanente Journal, 18*(1), (2014): 19–23.*

There is simply a calm and passive mental return to the in-and-out movement of the breath. Most meditation handles rambling thoughts gently and forgivingly. If thoughts ramble and stray from the intended focal point, there is no criticizing or belittling oneself for not meditating correctly. The goal is to return and continue putting attention on the breath. When this happens, the mind tends to become more still, more calm, and more peaceful.

Try both mantra meditation and breathing meditation for several days and see how they work for you. Pay close attention to the way you feel while you meditate and how you feel after meditating. Notice how differently you feel compared to when you haven't been meditating.

Of the many versions and variations of meditation, let's look at some other forms that are particularly effective for relaxation.

21.5 Additional Ways to Meditate

The most critical component of meditation is to focus on a single object, word, or idea and remain focused for some time. You have learned 2 forms, mantra meditation and breathing meditation. Here are some additional ways of meditating that allow the mind to focus more fully. Several of the following meditation exercises come from Lawrence LeShan's classic little book on meditation titled, *How to Meditate: A Guide to Self-Discovery.*[5]

Contemplation

In the **contemplation** form of meditation, begin by selecting an item such as a natural object—a rock, a twig, a leaf, or a seashell. Or you could choose something like a piece of cloth, a small ball, a piece of jewelry, or even a shoelace. You should select an object that you can hold comfortably in your hands. Hold the object at a comfortable visual distance, and be flexible about this distance.

In contemplation, the goal is to simply look at the object. You are not trying to judge or analyze the object: You simply place your attention on the object and observe it passively. Let yourself connect with the object through touch as well as by sight. Just pay attention to the object, nothing more. As your attention wanders, gently bring it back to the object. This is a form of mindfulness, which we treated in Chapter 7.

Breath Counting

This type of meditation is somewhat like the restful breathing relaxation exercise you learned in Chapter 17, as well as the breathing exercise earlier in this chapter. When you practice breath counting, you simply focus directly on the breath as it comes in and goes back out.

Do this **breath counting meditation** by closing your eyes, putting your attention on your breath, and breathing normally. You inhale, and then when you exhale, you say the number "one." The next inhale is followed by the exhale and saying the number "two." You continue through the number "four" and then repeat from one to four. You also might include the silently spoken word *and* with each inhale. As you inhale, say the word *and* followed by exhaling to the number.

Thought-Watching

You practice **thought-watching** by picturing yourself sitting peacefully at the bottom of a clear lake. Begin with the understanding that large bubbles tend to rise from the bottom of the lake to the top easily and effortlessly. With this idea in mind, tune your attention to your thoughts as they pass into your mind. As a thought comes in, picture the thought as a bubble rising slowly and smoothly to the surface above you and then out of your attention. Follow this by the next thought that gently rises to the surface. LeShan suggests that each bubble rises from the bottom to the top in about 5 to 8 seconds. As each thought comes in, do not try to analyze or judge it; simply approach each thought or sensation with the attitude of

"Oh, that's what I'm thinking. How interesting." Then, as it passes out of visual space, you move to the next one.

If sitting at the bottom of a clear lake is an uncomfortable image for you, you may use the image of watching puffs of smoke rise from a large campfire on a windless day. You also may use the image of your thoughts as logs floating down the river, first coming into view and then passing across and soon fading out of your view.

Chakra Meditation

Chakras are energy centers in the body through which spiritual and emotional energies flow. The word *chakra*, taken from Hindi, means "wheel of energy." Proponents of Hindu philosophy believe that free, unblocked, flowing energy through the chakras is vital for the health and well-being of the whole person. When the flow of ***prana*,** or energy, is blocked, disease results.

Although chakras have not been proven as measurable physiological centers in Western science, many individuals have experienced the benefits of chakra meditation. In **chakra meditation,** each of the 7 chakras within the body corresponds to a specific color. These chakras are the point of focus. Each chakra has individual characteristics, and each influences a different aspect of the personality.

The base chakra (red) controls the basic human survival instincts and provides an essential "grounding." Our most basic human instincts originate from this chakra.

The sacral chakra (orange) is linked to sexuality and reproductive capacity.

The solar plexus chakra (yellow) is said to direct our awareness of self within the world. This is the seat of our emotional life and existence.

The heart chakra (green) is connected to love and compassion. This chakra is the center of feelings of love, harmony, and peace.

The throat chakra (blue) is linked to individual creativity and communication.

The brow chakra (indigo) forms the seat of both intuition and awareness. It is seen as the seat of perception, often perception beyond our physical senses.

The crown chakra (violet or white) links our spiritual connection to the universe around us; it is our link with the divine. This chakra also balances the interior and exterior energies of our existence, connecting us to the world around us.

When you practice chakra meditation, you focus inwardly, creating these chakras in your imagination. You may visualize the chakras as circles, balls, or wheels of colors that correspond to each chakra at each location. You may visualize each chakra spinning, pulsating, or radiating its color. Focus directly on each one, and allow your imagination to create this inner experience freely.

Asmiana/Shutterstock.com

The main chakras within the body each correspond to a specific color. In chakra meditation, the point of focus is on each of these chakras.

Walking Meditation

Another type of meditation that has great appeal for some people incorporates the principles of mindfulness you learned in Chapter 7. **Walking meditation** involves the use of movement rather than a mantra or the breath as one's focus.

The focus should be on the movement of each foot, broken up into three stages: lifting, moving, and placing. The simple aim is to be aware, noting each sensation as it occurs. Of course, as in sitting meditation, the mind will wander and must be brought gently back to the object of meditation—in this case, the movement of each step. Through practice and awareness, the mind increasingly concerns itself only with what *is*. Psychotherapist Nancy J. Napier describes how to practice walking meditation:[6]

1. Begin by deciding where you're going to walk—someplace where you won't be disturbed. Be sure you are wearing comfortable clothing, and that you have set aside whatever time you need to do this meditation.
2. Take a few moments to direct your attention to the bottoms of your feet. Feel how your feet contact the surface under you.
3. Remind yourself that your feet support your body, and the surface under you supports your feet. There's no effort here. Just be aware of the support available to you.
4. Now slowly take a step forward. As you do, notice how you lift one foot and, as you move forward, the foot still on the ground begins to roll forward as well, and you naturally shift your weight. Do this slowly enough so you can feel the various elements of taking a step.
5. Pay attention to how your other foot touches the ground as you move into the step. Very slowly, simply allow the step to unfold and notice the movement of your body. Do this in whatever way will enable you to keep your balance comfortably. The point here is not to get anywhere. It's to be aware of each element of your steps, to bring awareness to the process of walking mindfully.
6. As you walk, also notice your surroundings—colors, shapes, textures, smells. Allow into your awareness whatever arises, and invite yourself to refocus on the bottoms of your feet and the steps you're taking if you find that your mind has drifted away from the meditation.
7. Also, notice your breathing. Notice how it feels to settle your awareness in your belly, as well as in the bottoms of your feet. Your goal is to be present in your body as you notice your experience of walking slowly in this moment.
8. If you notice any feelings or thoughts arise, whether you experience them as comfortable or uncomfortable, name them—"thought," "feeling"—and then let them just keep moving through. Notice that if you will allow it, every thought, feeling, and sensation that arises naturally moves through and moves on.
9. When you have walked for your allocated time, stop and take a moment to notice how you feel, physically and psychologically.
10. As you come back to everyday activities and awareness, notice what happens if you continue to inhabit yourself the way you did during your walking meditation.

The key component of walking meditation is continual awareness of movement as it is happening. As your mind wanders, gently bring it back to the process.

21.6 Benefits of Meditation

By relaxing the body and calming the mind, meditation can reduce the harmful effects of tension and stress—factors associated with many medical conditions. Although meditation has its roots in Eastern religious practice, the health benefits are independent of the spiritual and philosophical components of meditation. You can bring your own beliefs and worldview to the meditative experience.

Members of many Eastern religions have long realized the benefits of meditation, but most Westerners have approached the practice with a skeptical eye. New imaging technology, however, brings scientific evidence to support the benefits of meditation. Functional magnetic resonance imaging (fMRI) has been used to find and characterize the brain regions that are active during meditation. Research suggests that various parts of the brain known to be involved in attention and the control of the autonomic nervous system are activated, providing a neurochemical and anatomical basis for the effects of meditation.[7] For example, meditation was shown to produce significant increases in left-sided anterior brain activity, which is associated with positive emotional states. In this same study, meditation was also associated with increases in antibody titers to the influenza vaccine, suggesting potential linkages among meditation, positive emotional states, and improved immune function.[8] Recent studies such as these involving imaging have advanced the understanding of meditation.

Physiological Benefits

Herbert Benson and his colleagues at Harvard researched volunteer practitioners of TM to determine if meditation could counter the physiological effects of stress. Their study[9] showed that during meditation:

- Heartbeat and breathing rates slow
- Oxygen consumption falls by 20%
- Blood lactate levels, which are known to rise with stress and fatigue, drop
- Electroencephalograms (EEGs) show an increase of alpha brainwave patterns, another sign of relaxation

Many stress-related health problems have responded favorably to meditation, including:[10]

- High blood pressure
- Anxiety
- Depression
- Insomnia
- Addiction
- Post-traumatic stress disorder
- Attention deficit disorder
- Autism
- Alzheimer's
- High blood pressure

Meditation has been found helpful in alleviating fibromyalgia,[11] headache pain,[12] and stress in caregivers of dementia patients.[13] One report suggested that practicing meditation can positively influence chronic illness and can serve as a primary, secondary, and tertiary prevention strategy.[14]

Psychological Benefits

In addition to its physiological benefits, studies on meditation show reduced anxiety levels in individuals after they begin to practice meditation regularly.[15] Additional research[16] has shown that meditation has many psychological benefits, including:

- Improved job performance and satisfaction
- Improved academic performance in high school and college

STRESS STUDIES

Mellow, Empathic Meditators

Researchers measured brain electrical activity before, immediately after, and 4 months after a 2-month course in meditation. They found consistently increased activity on the left side of the prefrontal cortex, which is the area of the brain associated with joyful and serene emotions.*

And that's not all. Researchers at the University of Wisconsin used advanced brain images to show that certain types of meditation may increase the human capacity for empathy, defined as the ability to understand and share another person's experience. In 1 study, researchers compared brain activity in meditation experts with that of subjects just learning the technique. They measured brain activity, during meditation and at rest, in response to sounds—a woman in distress, a baby laughing, and a busy restaurant—designed to evoke a negative, positive, or neutral emotional response.

The researchers found that both novice and expert meditators showed an increased empathy reaction when in a meditative state. However, the expert meditators showed a much greater response, especially to the negative sound, which may indicate a higher capacity for empathy as a result of their extensive meditation training.

An increased capacity for empathy, the authors say, may have clinical and social importance. The next step, they add, is to investigate whether compassion meditation results in more altruistic behavior or other changes in social interaction.**

Source: **"Meditation in Psychotherapy,"* Harvard Mental Health Letter, *21(10), (2005): 1–4.*
***A. Lutz, J. Brefczynski-Lewis, T. Johnstone, et al., "Regulation of the Neural Circuitry of Emotion by Compassion Meditation: Effects of Meditative Expertise,"* PLoS ONE *[online journal], March 2008. Accessed on May 28, 2008.*

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

- Better long-term and short-term recall
- Sounder sleep
- Less fear
- Fewer phobias
- More positive mental health
- Increased empathy

Meditation is a useful, practical intervention in reducing stress and in dealing with a wide range of stress-related illnesses. Over the years, many carefully designed studies have investigated the benefits of meditation and deep relaxation. These comprehensive studies support the physiological and psychological benefits.

21.7 Frequently Asked Questions about Meditation

Following are some questions and answers related to topics that often arise when you learn meditation. Use these hints and suggestions to enhance your experience of meditation.

How do I stay focused when I meditate?

Regardless of the type of meditation you choose, a question that calls for special consideration is, "What do I do when my mind begins to wander?" We will use mantra meditation as an example.

Three things can happen as you begin repeating your mantra. Not all of these will happen every time, but each time that you practice, you will experience 1 or more of them. First, you will continue repeating the word for most of the time that your eyes are closed. You'll keep saying, "one . . . one . . . one . . . one . . ." for most of or the entire time you have set aside to meditate. In a typical experience, you won't remain focused on the word the whole time, but occasionally you will.

Another typical occurrence is that soon after you begin repeating your mantra, your mind begins to wander. Thoughts of what is going on in your life will come and go, and you will stop thinking of the mantra. This is not rare, *nor is it a bad thing;* you don't need to feel like you aren't doing it right. When your mind wanders—and it most certainly will—you gently bring your awareness back to the mantra.

Your thoughts might sound something like this, "one . . . one . . . one . . . one . . . one . . . one . . . one . . . I wonder what I'm going to wear tonight when I go to that party . . . I hope Rick comes to the party . . . he's such a nice guy . . . I should have gone shopping yesterday when those sales were on . . . those cool things won't be on sale again soon . . . but I did study for that test that's tomorrow . . . I wish I had more time to study . . ." At some point in this thought process, you will catch yourself thinking about all these other things besides your mantra; you will become aware of your chain of thoughts. When this happens, you will quietly bring yourself back to repeating your mantra. "Oh, yeah, one . . . one . . . one . . . one . . ." Each time this happens, you do the same thing.

The third thing that may happen is that you may fall asleep. If so, you may experience the most profound period of sleep you have had in a long time! If this happens (and it will from time to time), and as you awaken from your deep sleep, gently repeat the mantra for a few more minutes before you finish your meditation. Don't scold yourself for falling asleep. Take advantage of this opportunity to get some deep rest. If you fall asleep regularly when you meditate, this is a good sign that you need more sleep.

Always be gentle with yourself during meditation. Never think that you are a lousy meditator, or that you cannot meditate because your mind wanders so much. People who have practiced meditation for many years still notice that their mind wanders as they intend to repeat the mantra. This is normal. Whatever happens during meditation is appropriate if you keep in mind the single intention of repeating the mantra and returning to it when you wander off. Whenever it occurs to you to do so, simply insert the mantra under all your other thoughts that come and go. This is your only intention.

When is the best time to meditate?

This is something you will figure out as you practice meditating on your own, but here are some general guidelines:

- Many people get the best results when they meditate at least once a day; twice is ideal. Typically, 2 times of the day work best: immediately after waking up in the morning, and in the early afternoon, sometime between 3 p.m. and 6 p.m. This is a beautiful way to rejuvenate yourself for your evening activities. Your meditation schedule will depend on what works for you.
- Meditating before eating rather than afterward is better. When you meditate after eating, energy is diverted to digesting food. You will be more likely to fall asleep from fatigue if you meditate immediately after a meal.
- Avoid using meditation to help you fall asleep. You don't want to associate meditation with sleep. Most people find that they are more alert and refreshed after meditation; meditation wakes you up. Other techniques in this book are useful for helping you fall asleep quickly.

How long should I meditate?

With any method of meditation, begin with sessions that last about 10 minutes. With practice, and if it feels good to you and is producing satisfactory results, you may want to increase your meditation periods to 15 to 20 minutes or more. With practice, you will become aware of what your body needs. If you only have 5 minutes to meditate before an important meeting, a test, or an eventful evening, take those 5 minutes and enjoy a quick meditation. Any amount of time meditating is time well spent.

Will meditation get easier with practice?

Some people practice meditation for years and still have days when their mind wanders and the calmness of meditation escapes them. A distracted mind is one of the noticeable challenges to the practice of meditation. Even the great meditation masters refer to their daily meditation as "practice" because it is not a finished endeavor.

A person does not necessarily get better at meditation with regular practice any more than a person gets better at eating breakfast every day. The way you meditate doesn't change. What does change, however, are the physiological and psychological effects that expand with regular practice. For example, the resting heart rate during meditation may decrease to as low as 30 beats per minute for those who have practiced meditation for years. Some report that their breathing rate becomes as low as 1 inhalation and exhalation during an entire minute. These are verifiable signs that we are decreasing our demand for energy during meditation, and thus the stress response is less active.

Another normal occurrence with regular meditation is that the effects of meditation remain with you throughout the day. You feel more calm and peaceful and enjoy all the benefits of feeling relaxed, as a natural occurrence, during the entire day.

Does it matter if I lie down, rather than sit, during meditation?

Earlier in the chapter, we discussed sitting with dignity during meditation. What is so special about sitting? Here is what Jon Kabat-Zinn says about the importance of sitting during meditation:

> Sitting down to meditate, our posture talks to us. It makes its own statement. You might say the posture itself is the meditation. If we slump, it reflects low energy, passivity, a lack of clarity. If we sit ramrod-straight, we are tense, making too much of an effort, trying too hard. When I use the word "dignity," everybody immediately adjusts his or her posture to sit up straighter. But they don't stiffen. Faces relax, shoulders drop, head, neck, and back come into natural alignment. The spine rises out of the pelvis with energy. Everybody seems to instantly know that inner feeling of dignity and how to embody it.[3]

So, when you practice meditation, sit in a way that affirms an attitude of presence, openness, calmness, and dignity.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

How will I know if I am meditating correctly?

Contrary to what you might think, the quality of a good meditation may be less about what happens during meditation and more about how you feel afterward. For this reason, you shouldn't be too concerned about what's happening while you meditate (if your mind wanders, if you fall asleep, or if you keep repeating the mantra), as long as your single intention is to return to your point of focus when it occurs to you. How you feel afterward is the deciding factor in whether meditation is working for you. When you have finished meditating, do you feel more alert, more alive, calmer, more energized? If you do, this feedback tells you that meditation is having positive effects and is worth continuing as a regular practice.

21.8 Conclusion

Meditation is simple and powerful. Although we may not entirely understand why or how it works, we know that it does reduce stress and enhance our health and well-being. Of the several types of meditation and their limitless variations, you can personalize your meditation practice to work for you. Mantra meditation and breathing meditation are simple methods to get you on your way to experiencing the benefits of meditation. For people who learn meditation, few methods are as warmly embraced for regaining balance, restoring energy, and bringing peace and tranquility.

ACTIVITY

21.1 Mantra Meditation

Purpose To allow you to practice deep relaxation using mantra meditation.

Directions Prepare your environment for relaxation. Practice doing mantra meditation at least 2 times according to the instructions in this chapter. This exercise is best done sitting in a comfortable position rather than lying down. Allow approximately 15 minutes to complete the exercise.

After completing mantra meditation, respond to the following questions. Describe how you felt about your stress levels.

First meditation:

1. What mantra did you select? Why?
2. How did you feel before meditating?
3. What things did you notice happening while you meditated (mental, emotional, physical)?
4. How did you feel while you meditated?
5. How did you feel after meditating (both immediately and several hours after meditating)?
6. Any other thoughts, concerns, or insights you had about your experience meditating?

Second meditation:

1. What mantra did you select? Why?
2. How did you feel before meditating?
3. What things did you notice happening while you meditated (mental, emotional, physical)?
4. How did you feel while you meditated?
5. How did you feel after meditating (both immediately and several hours afterward)?
6. Any other thoughts, concerns, or insights you had about your experience meditating?

Classroom experience (if applicable):

1. What mantra did you select? Why?
2. How did you feel before meditating?
3. What things did you notice happening while you meditated (mental, emotional, physical)?
4. How did you feel while you meditated?
5. How did you feel after meditating (both immediately and several hours afterward)?
6. Any other thoughts, concerns, or insights you had about your experience meditating?

Summary: After you have practiced the exercise and described your experiences, include a brief review of what you liked or did not like about this technique. Compare this technique to others you have practiced. Would you consider regularly using this relaxation technique for stress management? Why or why not?

Key Points

- The essential component of meditation is the process of bringing the mind to focus on a single object, word, or idea to the exclusion of all others, and to dwell on it for a period of time.
- Herbert Benson's research found 4 key factors that result in the relaxation response: a mental device, a passive attitude, a quiet environment, and a comfortable position.
- A mantra is a repeated word, sound, or phrase used as a point of focus during meditation.
- Regular meditation has excellent physiological and psychological benefits.
- Many forms and variations of meditation allow you to develop the practice that produces the best results for you.

Key Terms

lotus position
meditation
mantra meditation
mantra
faith factor
transcendental meditation
breathing meditation
contemplation
breath counting meditation
thought-watching
chakras
prana
chakra meditation
walking meditation

References

1. *The Relaxation Response*, by H. Benson (New York: Morrow Books, 1975).
2. *Wherever You Go, There You Are*, by J. Kabat-Zinn (New York: Hyperion, 1994).
3. *Stress Management for Wellness* (4th ed.), by W. Schafer (Belmont, CA: Wadsworth/Thomson Learning, 2000).
4. *Buddha's Little Instruction Book*, by J. Kornfield (New York: Bantam Doubleday Del Publishing Group, 1994).
5. *How to Meditate: A Guide to Self-Discovery*, by L. LeShan (Boston: Little, Brown and Company, 1974).
6. "Walking Meditations," by N. Napier, *Conscious Living*, retrieved July 23, 2019, from https://www.nancynapier.com/1999/05/05/walking-meditation/.
7. "The Meditative Mind: A Comprehensive Meta-Analysis of MRI Studies," by M. Boccia, L. Piccardi, & P. Guariglia, *BioMed Research International, 2015* (2015): 419808.
8. "Alterations in Brain and Immune Function Produced by Mindfulness Meditation," by R. J. Davidson, J. Kabat-Zinn, J. Schumacher, et al., *Psychosomatic Medicine, 65*(4) (2003): 564–570.
9. "Meditation: An Introduction," National Institute of Health, NCCAM Publication No. D308, June 2010.
10. "Transcendental Meditation and Its Many Benefits," by E. Scott, retrieved December 8, 2019, from https://www.verywellmind.com/transcendental-meditation-and-its-many-benefits-4159899.

11. “Mindfulness Meditation Alleviates Fibromyalgia Symptoms in Women: Results of a Randomized Clinical Trial,” by E. Cash, P. Salmon, I. Weissbecker, et al, *Annals of Behavioral Medicine: A Publication of the Society of Behavioral Medicine, 49*(3) (2015): 319–330.
12. “Hypnotherapy or Transcendental Meditation versus Progressive Muscle Relaxation Exercises in the Treatment of Children with Primary Headaches: A Multi-Centre, Pragmatic, Randomised Clinical Study,” by M. C. Jong, I. Boers, H. A. van Wietmarschen, et al., *European Journal of Pediatrics, 178*(2) (2019): 147–154.
13. “Mindfulness Training for People with Dementia and Their Caregivers: Rationale, Current Research, and Future Directions,” by L. Berk, F. Warmenhoven, J. van Os, M. van Boxtel, *Frontiers in Psychology, 9* (2018): 982.
14. “Meditation’s Impact on Chronic Illness,” by R. Bonadonna, *Holistic Nursing Practice, 17*(6) (2003): 309–319.
15. “The Effect of Mindfulness-Based Therapy on Anxiety and Depression: A Meta-Analytic Review,” by S. G. Hofmann, A. T. Sawyer, A. A. Witt, D. Oh, *Journal of Consulting and Clinical Psychology, 78*(2), (2010): 169–183.
16. *The TM Book: How to Enjoy the Rest of Your Life*, by D. Denniston & P. McWilliams (Allen Park, MI: Versemonger Press, 1975).

chapter 22

Yoga

Do I have to twist myself into the shape of a pretzel to enjoy the benefits of yoga?

Is yoga the same as meditation?

What is the best way to prepare myself to practice yoga?

Is yoga a New Age cult or a religion?

How many times a week should I do yoga, and for how long?

Tao Associates/The Image Bank/Getty Images

> Before you learn to stand on your head, you need to learn to stand on your own two feet.
>
> —*Swami Satchidananda*

Learning Objectives

Study of this chapter will enable you to do the following:

22.1 Explain the meaning, purpose, and benefits of yoga.

22.2 Differentiate between types of yoga.

22.3 Learn how to prepare for yoga practice.

22.4 Practice various yoga poses designed to promote well-being and relaxation.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

Real People, Real Stories

Students Experience Yoga While I was doing yoga, I noticed myself gradually begin to relax. My muscles loosened up, and I could feel my body, as well as my mind, begin to relax. I felt calmer, and like I had fully stretched my body, and it felt good. Before I had tried yoga, I thought of it as all of these weird stretching poses that weren't extremely helpful. After doing some yoga poses, I can attest that they are helpful and relaxing. I also was impressed by how good I felt after practicing the poses, and how relaxing yoga actually can be. Now I'm a believer in the power that yoga can have on the body.

—Kathryn R.

* * *

I thought yoga was easy, but after doing it, I realized that it's a lot harder than it looks. I realized that I'm not as flexible as I used to be, and that yoga would help me be more flexible. Before I tried yoga, especially being a guy, I thought it was just for flexible women. I didn't think I could benefit from yoga, and I thought it looked easy. Now I know that yoga is for everyone, whether they are flexible or not, and I know that it isn't as easy as it looks, but it also is very relaxing and refreshing.

—Brett M.

* * *

I went to the yoga class and, to be honest, I was a little skeptical. I thought it would be great to do and help my body with flexibility, but I didn't think it would have the effects on my body that it did. After the session, my body felt great; I had a high energy level for the rest of the night. I didn't have a problem going to sleep, and when I woke up in the morning, I had had the best night's sleep! After yoga, mentally, I had the same feeling I get when I'm done jogging, and it was less painful on my knees. I definitely enjoyed the session and will make yoga a regular part of my exercise routine.

—Amy H.

22.1 Yoga

When you think of yoga, what images come to mind? You may think of slender people from India putting their bodies into contorted, pretzel-like positions and making humming sounds. This is a familiar image because of the origins of yoga. But behind this inaccurate stereotype lies a satisfying, practical method of achieving peak physical health, psychological well-being, and deep inner peace, not to mention a reduction in stress.

Defining yoga is no simple matter. In the Western world, many think of yoga as primarily an exercise system. Others refer to it as a meditation system or a spiritual lifestyle.[1] **Yoga** is a system of physical postures, breathing techniques, and meditation to promote bodily or mental control and well-being.[2] The term *yoga* comes from the Sanskrit root *yuj*, which means "to join" or "to yoke together." It signifies the union of the body, mind, emotions, and spirit into a single, harmonious, integrated whole. Swami Rama[3] described yoga as an attempt to take into account all 3 sides of human life—the body, the mind, and the soul—to establish harmony between the physical, the mental, the emotional, and the spiritual dimensions. The idea is that a healthy body is necessary to house the inner soul. Once mind and body have achieved balance—once they have become integrated and still—healing takes place at all levels.

This chapter introduces you to the stress-management strategy known as yoga. You will discover that yoga is not designed to make you withdraw from the world and accept a reclusive lifestyle, as some people think. To the contrary, yoga is about learning how to live life more fully, to do more, with more joy and less stress.

Asier Romero/Shutterstock.com

When you think of yoga, what images come to mind?

22.2 Background

Yoga is regarded as a mind-body intervention that originated in India. The exact dates of its beginnings are not known, but stone carvings found in archeological sites showing figures in yoga positions have been located in

FYI

Yoga in the Mainstream

As the popularity of mind/body exercise continues to spread, the practice of yoga has moved from alternative to the mainstream. The "2016 Yoga in America" study released by *Yoga Journal* and Yoga Alliances shows that the number of U.S. yoga practitioners has increased to more than 36 million, up from 20.4 million in 2012. Seventy-four percent of American practitioners have been doing yoga for 5 or fewer years. People between the ages of 30 and 49 make up 43% of the practicing public, followed by those ages 50 and over (38%) and 18 to 29 (19%). Far more women practice yoga (72%) than men (28%). The top 5 reasons people start doing yoga are flexibility (61%), stress relief (56%), general fitness (49%), improve overall health (49%), and physical fitness (44%).

Source: *"2016 Yoga in America Study Conducted by Yoga* Journal *and Yoga Alliance Reveals Growth and Benefits of the Practice," by D. Mackey, retrieved July27, 2019, from https://www.yogaalliance.org/Get_Involved/Media_Inquiries/2016_Yoga_in_America_Study_Conducted_by_Yoga_Journal_and_Yoga_Alliance_Reveals_Growth_and_Benefits_of_the_Practice.*

the Indus Valley dating back 5,000 years or more.[4] In general, the tradition has been passed down from generation to generation by word of mouth, and from teacher to student.

One could spend a lifetime, you could spend a lifetime studying the yoga disciplines, such as fasting, vegetarianism, disciplined thinking, and the extensive yoga philosophies. Ways of practicing yoga[5] include the yoga of wisdom (jnâna yoga), the yoga of service (karma yoga), the yoga of wisdom and knowledge (raja yoga), and the yoga of devotion (bhakti yoga). A wide range of information is available through classes, books, DVDs, and yoga websites if you are interested in exploring these aspects of yoga in more depth.

The Indian sage Patanjali is believed to have assembled a collection of yoga theories and practices known as the **yoga sutras** (aphorisms or thoughts). The system he wrote about has 8 limbs or branches of yoga, consisting of the following:[6]

1. **Yama,** meaning correct behavior toward others: nonviolence, truthfulness, not stealing, not wasting energy, abstaining from greed.
2. **Niyama,** meaning the principles by which you should live your own life: purity, contentment, spiritual observances, study, devotion.
3. **Asana**—postures to prepare the body.
4. **Pranayama**—expanding the life force through breathing exercises.
5. **Pratyahara**—turning the senses inward to explore the inner universe.
6. **Dharana,** concentration—effortless focused attention; training the mind to meditate.
7. **Dhyana,** meditation—a continuous flow, meditation perfected.
8. **Samadhi,** absorption—lost or found in the Divine; unity.

> Being myself includes taking risks with myself, taking risks on new behavior, trying new ways of being myself, so that I can see how it is I want to be.
>
> —*Hugh Prather*

Present-day yoga practice frequently includes a focus on the third, fourth, and seventh branches of yoga—namely, asanas (physical postures or poses), pranayama (controlled breathing), and dhyana (meditation). The English word *meditation* also applies to dharana (concentration). Collectively, these are known as hatha yoga, which we will explore in this chapter. Among other things, hatha yoga is designed to reduce stress and restore balance.

Yoga has no political or religious boundaries. Anyone can practice yoga, regardless of age, sex, or physical condition. Those who are interested in beginning regular yoga practice would do well to seek a class with a qualified teacher who can provide guidance and instruction, so your first experience with yoga will be positive. You will find tips for selecting a skilled, competent instructor later in this chapter.

22.3 Overview of Yoga Styles

Over time, yoga has evolved and adjusted into many systems and forms. To help you understand the uniqueness of each, here is an overview of some of the yoga styles.[7]

Hatha yoga is a form of yoga involving simple poses that flow from one to the other at a comfortable pace. Participants are encouraged to proceed at their own pace, taking time to concentrate on breathing and meditation in their practice. This yoga style is ideal for winding down at the end of a tough day and works well as a relaxation practice.

Iyengar yoga is a popular style that is softer on the body and is well-suited for beginners and those who haven't exercised in a while. It uses props such as chairs, straps, blocks, and pillows to compensate for lack of flexibility, which is helpful for those who have back or joint problems.

The key to any style of yoga is to learn the proper fundamentals and form. Iyengar yoga emphasizes balance and alignment, along with meditation. The person remains in poses longer than in most other yoga styles, developing a state of focused calm.

Benefits of iyengar yoga include toning muscles, eliminating tension, and easing chronic pain. When weak areas of the body are strengthened and stretched, the body returns to its correct alignment.

Ashtanga yoga (power yoga) is a popular choice for athletes because it is light on meditation but heavy on developing strength and stamina. The poses are more complicated than those performed in other styles, and students move quickly from pose to pose to build strength, endurance, and flexibility.

This style is suitable for anyone in reasonable physical condition, but those who are new to exercise should avoid this style of yoga. Even "beginner" routines can be physically demanding workouts. Ashtanga yoga takes students through a warm-up to "activate" the muscles. Students then move from 1 pose to another in a continuous flow, combining the inhale and exhale of the breath with movements.

The cornerstone of power yoga is the sun salutation, a 12-pose, flowing series with many variations. This sun salutation focuses on linking the breath to each movement.

Kundalini yoga involves mantras (chanting), meditation, visualization, breath work, and guided relaxation. It focuses on healing and "purifying" the mind, body, and emotions. Kundalini yoga is designed to activate kundalini energy in the spine. Kundalini yoga is beneficial in dealing with addictions, and many people find it to be a natural way of releasing endorphins via the breathwork and poses.

Bikram yoga is done in a hot room, 90 to 105 degrees Fahrenheit, replicating the temperature of the birthplace of yoga in India. This style moves sequentially through 26 postures performed in a precise order. The Bikram series warms and stretches muscles, ligaments, and tendons in the order in which they should be stretched according to Bikram Choudhury, developer of this style of yoga.

When combined with the heat, Bikram yoga makes for a tough workout. The exercises are more physical than most, with high intensity. This style is recommended for yoga veterans and extremely fit individuals.

Kripalu yoga is more spontaneous, flowing, and meditation-oriented. The first stage of Kripalu yoga involves primarily postural alignment while including a focus on breath and movement. The individual holds the poses only briefly.

The student progresses to the second stage, which includes meditation, and holds the poses longer. Finally, the practice of poses becomes a spontaneous dynamic movement. The individual experiences the essence of Kripalu yoga through a continuous flow of postures while meditating. This style of yoga is both gentle and dynamic.

Sivananda yoga has a series of 12 poses, with the sun salutation as its foundation, along with breathing exercises, relaxation, and mantra chanting.

You may want to experiment with several styles of yoga to determine which best suits your needs. For relaxation, hatha yoga is a popular choice.

22.4 Benefits of Yoga

The regular practice of yoga promotes overall health benefits, as well as specific relaxation benefits. Yoga has a long history of helping people reduce psychological stress. As a form of mind-body therapy, it is being used for a variety of clinical conditions such as cancer, eating disorders, hypertension, and pain relief. Healthy adults practice yoga for health maintenance and disease prevention.[8] An estimated 8.7% of the U.S. adult population practices yoga for both wellness and specific health issues.[9]

Research suggests that yoga may:[10]

- Help improve general wellness by relieving stress, supporting good health habits, and improving mental/emotional health, sleep, and balance
- Relieve low-back pain and neck pain
- Relieve menopause symptoms
- Help people manage anxiety or depressive symptoms associated with difficult life situations (but yoga has not been shown to help manage anxiety disorders, clinical depression, or posttraumatic stress disorder [PTSD])
- Help people quit smoking

For those wounded by civilization, yoga is the most healing salve.

—*Terri Guillemets*

- Help people who are overweight or obese lose weight
- Help people with chronic diseases manage their symptoms and improve their quality of life.

Every unhealthy condition that results from chronic activation of the stress response can be improved through the regular practice of yoga. During yoga practice, most feel a decrease in the stress response through the duration of a yoga session. As a result, the body functions that are altered when we perceive a need to run or fight return to homeostasis. This balanced physiological state allows the body to correct problems that have arisen from chronic stress for lasting results long after the yoga session has ended.

An early study with Indian yogis, most of whom practiced hatha yoga, reported that the following characteristic pattern of physiological alterations occurred during regular yoga practice:

1. An extreme slowing of respiration to 4 to 6 breaths per minute.
2. More than a 70% increase in electrical resistance based on galvanic skin response (GSR), showing a state of deep relaxation.
3. A predominance of alpha brainwave activity.
4. Slowing of the heart rate to 24 beats per minute from the average rate of 72 beats per minute.[11]

Each change in physiology reflects a deep level of relaxation. Yoga activates parasympathetic nervous system activity, which restores energy, engages the immune system, and fixes many troubles that result from a chronically activated fight-or-flight response. In a nutshell, yoga relaxes us deeply.

In another review of the psychological effects of yoga among college students, researchers found that yoga is beneficial in providing physical relaxation, mental quiet, feelings of ease and peace, joy, and inner strength, with reductions in stress, worry, and negative emotions.[12] A Yale University School of Medicine study found that people who practice yoga reduced their blood pressure, pulse, and risk of heart disease. Janice Kiecolt-Glaser, a professor with the Institute for Behavioral Medicine Research at Ohio State University, believes these health benefits come about because yoga helps people better manage stress: "Yoga has a meditation component that is not true of other exercise."[13] See Table 22.1 for a list of conditions where yoga has been found to alleviate stress-related symptoms.

In addition to the physical and psychological benefits, yoga helps us expand and grow. When individuals start into a pose, they move in the direction of their physical limits of flexibility. Once they have found that limit, they ease back a little and then, with each exhalation, they move through that limitation, slowly and gently. This action of moving through the limits is translated into other areas of life where they have set up perceived barriers. As they meet challenges that seem difficult, they step back a bit, breathe, and do what is necessary to move through that barrier. Little by little, they expand and grow in all areas of life with confidence, because they have practiced doing it every time they practice yoga.

STRESS STUDIES

Effects of Yoga on Stress

Ninety individuals reporting moderate to high stress were randomly assigned to 16 consecutive weeks of yoga, or to a waitlist crossover group who did not practice yoga for 8 weeks then practiced yoga for 8 weeks. Stress and psychological health variables were assessed at baseline, 8 weeks, and 16 weeks.

The results of this study showed significant reductions in stress and all psychological health measures over 16 weeks. When compared to the control group, yoga practitioners showed significant decreases in stress, anxiety, and general psychological health and significant increases in well-being. The group who did not practice yoga showed signed significant decreases in stress, anxiety, depression, and insomnia after they crossed over and practiced yoga for 8 weeks.

Source: *"The Effects of Yoga on Stress and Psychological Health Among Employees: An 8–and 16-week Intervention Study," by R. E. Maddux, D. Daukantaite, U. Tellhed,* Alternative Therapies, 32*(2) (2018): 121–134.*

TABLE 22.1 Yoga Improves Well-Being

Relieves low back pain	Decreases stress
Relieves neck pain	Improves resilience
Relieves menopause symptoms	Positively affects eating habits
Helps manage anxiety	Positively affects physical activity habits
Helps manage depression	Improves sleep
Helps people quit smoking	Helps people lose weight
Reduces chronic fatigue	

Source: National Center for Complementary and Integrative Health (https://nccih.nih.gov/health/yoga/introduction.htm).

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

STRESS STORIES

Yoga Makes the Headache Go Away

For 2 years, I was a yoga instructor at a fitness center. Each week we would go through a routine of poses that must have been helpful to the participants, because they kept coming back for more. One older woman came nearly every single week like clockwork. She never said a word but seemed to enjoy herself while she was in class. One day I bumped into her as we were leaving. I asked her about her experience with the class. She said that she enjoyed the class tremendously. But what struck me most was that she said she always came to class with a headache from the stress of her day—and she always left without it.

—MO

22.5 Hatha Yoga

Hatha yoga, which is especially useful for generating a state of observable relaxation, will be the focus of the rest of this chapter. Hatha yoga consists of regulating the mind and body through breathing exercises (pranayamas), and more than 200 balanced physical postures or poses (asanas) that exercise and lengthen all the muscles in the body.[14] The physical positions require one to control, regulate, and become aware of one's physical existence. The emphasis is on complete mental attention to each position and movement, to the exclusion of everything else. With practice, different body functions become more integrated with one another, with all parts functioning together harmoniously. Energy from within is awakened, and the person practicing yoga feels radiant with vitality and energy.[14]

Hatha yoga practice includes physical postures, controlled breathing, and meditation or concentration. We will explore each of these in more detail.

Postures—Asanas

Asanas are gentle stretching positions and movements designed to rejuvenate and bring balance to the body in several ways.

First, yoga postures increase blood flow to areas of the body and stimulate them with a squeezing action that gently massages the internal organs. Asanas make use of gravity to increase blood flow to targeted areas. For example, an inverted pose such as the headstand increases blood flow and oxygen to the brain, enhancing its ability to function optimally. The shoulder stand produces an increase in blood flow to the thyroid gland. With an emphasis on deep breathing, oxygen-rich blood flows throughout the body.

Second, yoga poses increase flexibility in the spine. This ensures an unhampered nervous-system connection to all parts of the body because the nerves from the spine extend to all body tissues, organs, and glands. The yoga postures are designed to stretch and relax muscles, increase flexibility in the joints, and stretch ligaments and tendons. Most asanas work on more than one area of the body at the same time. For example, the twisting asanas bring benefits to the spine, adrenal glands, liver, pancreas, and kidneys.

The asanas are a discipline for the body, which in turn positively affects the mind. They balance the nervous system, increase flexibility, improve circulation, strengthen muscles, aid in digestion, improve the immune system, and increase breathing capacity and lung elasticity.

Yoga asanas are designed to develop the body with 3 primary facets of fitness: strength, flexibility, and balance. Every pose combines 1 or more of these fitness elements. Some poses may develop balance more than flexibility. Other poses are designed to build strength and flexibility. Working on a wide variety of poses develops each of these aspects of fitness throughout the entire body.

Tyler Stableford/The Image Bank/Getty Images

Nearly every yoga pose has an English name and a Sanskrit name. This one is called Warrior II Pose or Virabhadrasana II.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

Each pose has a specific Sanskrit name and a corresponding English equivalent. For example, the standing forward bend is called *uttanasana* (OOT-tan-AHS-ahna). Many of the asanas have animal names, such as the camel posture and the eagle posture. Yogis created their asanas in part by observing animal behavior. They noticed how animals instinctively stretch and contract their bodies. For example, after a cat finishes its nap, it naturally stretches, arching its spine in both directions. You don't need to know the names of the poses to do them correctly. With time and practice, the names become a natural part of your yoga practice.

Developing muscle strength and cardiovascular fitness and achieving other health benefits are possible while doing the yoga poses, but usually are considered secondary objectives. The goal of asana practice is to restore the mind and body to their natural state of well-being, alertness, and optimum functioning.

Pranayama—Breathing

Breathing has been called the "bridge" that connects mind and body. While hatha yoga is best known for postures that stretch, strengthen, and relax the body, breathing practices are just as important. In yogic teaching, breath control practices—pranayama—are emphasized as the central way to purify the physical and energy body, build strength and stamina, control the mind, and achieve clear perception.[1]

You have already learned and practiced relaxing breathing techniques (Chapter 17) and know that focused breathing is included in most of the relaxation exercises you have experienced. With yoga, your first breath-related goal is to make your inhalations and exhalations regular, smooth, and steady. Yoga master Ravi Dykema explains that the next goal is to learn to hold the breath briefly during each breath cycle. Slowing the breath is the way to slow constant mental turmoil.[1]

The key to breathing while doing yoga poses is to avoid straining. Yoga has many simple, safe, and easy breath practices. When you focus on your breath (voluntary breathing), as opposed to normal, automatic breathing, you should feel comfortable; you should exert very little effort but still remain focused on the breath. This may take some practice before you are entirely satisfied with it.

Baron Baptiste, a yoga instructor, describes a form of breathing used in yoga called **ujjayi breathing.** This can be used in other types of activities, too. Baron gives the following instruction for ujjayi breathing:[15]

> The breath we use for asana (yoga) practice is called *ujjayi breathing (oo-jeye-yee).* The ujjayi breath is an audible breath that has a soothing, rhythmic, oceanic quality. It is done by contracting the whispering muscles in your throat to create a long, hairline thin breath. You do not breathe down into your abdomen, but into your chest, lungs, and back.

Here is a step-by-step breakdown of how to do it:

1. Bring your first or second finger to the soft spot between your collarbones.
2. With your mouth closed, breathe in through your nose, feeling the gentle retraction of those muscles beneath your finger. It should feel as though you are whispering in reverse. You close the airway a little, so it's like breathing through a straw. Imagine the breath as a cleansing wind sweeping right in through that soft spot at the base of your throat.
3. For exhalation, put your hand in front of your face as if it's a mirror. Gently retract your belly and, with your mouth closed and the muscles in your throat still contracted, exhale through your nose as if you were going to fog up that mirror. The exhalation is exaggerated and extended. It is essential to keep your mouth closed, or you will lose energy on the exhalation.

This is the ujjayi breath. In, out, in, out . . . deep and free, rhythmic and steady. The volume of your breath both on the inhale and the exhale should be equal. If you get dizzy, you're forcing it too much. Just relax and let it be effortless—not taking in too much or too little air. It's like a wood-burning stove: Too much oxygen and you burn up the fuel too quickly; not enough and the fire goes out. A steady flow keeps the internal flame burning.

Dhyana—Meditation

The traditional goal of all yoga practice is to quiet your mind so you can see yourself and the world around you more clearly.[1] You learned about and practiced meditation in Chapter 21. Remember that meditation simply involves focusing the mind—putting your attention directly on something in a passive and interested way. As it relates to yoga, you meditate by staying acutely aware of the natural flow of your breathing and your physiology as you move into, hold, and come out of the poses. You notice that your mind becomes quieter, and you naturally feel more peaceful and calmer.

Michelangelo Gratton/Shutterstock.com

An essential part of yoga is a thoughtful focus on your breathing.

Putting It All Together

Yoga postures, controlled breathing, and mental focus work on all dimensions of the mind and body:

1. *Physically*, the body experiences healing, muscle strengthening, stretching, and relaxation. All tissues and organs in the body get a workout, and even the nervous system returns to a more balanced state. Yoga makes the physical body healthy, fit, flexible, and more immune to disease, which helps to alleviate physical disorders that have a connection to psychological or system imbalance.
2. *Mentally*, the mind cultivates peacefulness, alertness, and a heightened ability to focus and concentrate. As a result, one can relax, study, and understand oneself better, and thus develop a more balanced state of mind.
3. *Emotionally*, yoga frees the mind from anxiety, worry, and tension, and transforms negative emotions and behaviors into positive and higher states. Yoga also may help people overcome unhealthy emotional tendencies and conditioned responses. It can help an individual become more compassionate and sensitive to the needs of others.
4. *Spiritually*, yoga develops inner strength. Yoga experts claim that yoga helps individuals evolve spiritually because it enables them to understand and accept life's situations and experiences from a broader perspective, thereby increasing trust in a more elevated purpose for being, and faith in a higher power and the goodness of life.
5. *Behaviorally*, yoga directs wasted energy away from behaviors that could be detrimental to well-being. It leads to a more balanced and harmonious interaction with others, and to inner peace of mind. Yoga brings about a deep state of relaxation that makes individuals more productive and more open to enjoy life.

22.6 How to Practice Yoga

Now that you understand the components of hatha yoga, you are ready to experience its relaxing benefits. Asana practice for beginners and experienced yogis appears to be similar. A typical yoga session proceeds through a series of postures, being mindful of what is happening in the body, entering and ending each pose slowly, breathing fully and deeply in and out through the nose, and enjoying the process.

Yoga poses are done in a variety of positions, including standing, sitting, kneeling, lying on the back, lying on the stomach, on hands and knees, and in inverted positions. Most asanas have many variations. Depending on your level of balance, strength, and flexibility, you can alter the way you do a pose to any of the variations. Therefore, yoga is appropriate for individuals of all levels of fitness and flexibility.

If you have not done yoga before, you might find that many of the poses resemble the stretching exercises you did when you were in physical education classes in junior high and high school, or when you stretched in preparation for an athletic or sporting activity. Many of the poses are the same, with more emphasis on fluid movement between postures and increased awareness of breathing.

As you move into and out of each pose, remain focused on the flow of breathing. In general, inhalation takes place during expansion phases of a pose—like when you move from downward dog to upward dog—and exhalations occur during the contracting phases of a pose—when you move from upward dog to downward dog. As you hold a pose, allow the breath to flow like a circle, going in through the nose, down into the lower parts of the lungs, turning around, and softly coming back out through the nose. Visualize the flowing breath like a Ferris wheel slowly moving around in a smooth, circular pattern. The breath should not be jerky, nor should there be long pauses in the flowing breath between an inhale and exhale or between an exhale and inhale.

Move slowly into each pose, and back out of the pose. Never jerk through a joint's range of motion. Take your time. Allow your body to move smoothly from beginning to end of a pose. Hold each pose for at least 20 seconds—longer is better. The muscles, tendons, and ligaments require about 20 seconds to release and move into a stretching mode. Some poses, like the sun salute, involve movement rather than static stretching. Move through these slowly and smoothly.

Begin a pose by moving to an almost maximal range of motion, and then ease back a little from there, so you don't feel any pain. As you hold the pose and gently breathe, allow yourself to move ever so slightly more into the stretch each time you exhale. Let the exhalation help you expand. With practice, you will find your body responding by easing you gently through your physical limits.

Keep your awareness focused on your breath and what is happening in your body. Try not to let your mind wander. As you keep your focus, gently move through your limits, and extend yourself. At the same time, make sure that you don't overextend and cause unnecessary damage to tissues. *Never push yourself through the range of a stretch to a point where you feel pain.* A feeling of slight muscle discomfort is okay, but pain should not occur when doing yoga. If you feel pain, the tissue is sending a message that it is being pulled or pushed too far. That leads to injuries and to fear associated with that pose in the future.

Staying focused on what is happening inside, paying attention to the sensations, and easing back when you feel pain will prevent damage and lead to a positive yoga experience. If you are not very flexible, yoga is an ideal exercise for you. Your flexibility will increase gradually with regular practice, and you will realize that everyone has a different level of flexibility. Where you are now is fine. Yoga is not limited to the most limber among us. Everyone experiences the healing effect, no matter how far he or she can stretch into the poses.

Yoga usually is done barefoot, wearing comfortable athletic attire or loose clothing that breathes easily. The same attire that you wear to the gym is right for practicing yoga. You might find it helpful to bring a towel with you, and a yoga mat is especially useful on hard floors. You can practice yoga nearly anywhere—at home, at school, in the office, at the beach, in a park, or anywhere you have some open space, an environment with minimal distractions, and some fresh air.

22.7 Taking Precautions Before Starting Yoga

Yoga, overall, is considered safe. But there are some situations in which yoga can pose a risk, especially if you have certain health conditions, such as joint problems or a history of low back or neck pain. You may need to avoid certain yoga positions depending on your condition because of the undue strain they may cause.

Also, see your health care provider before you begin yoga if you have any of the following conditions or situations, because complications can arise:

- Balance problems
- Uncontrolled high blood pressure
- Certain eye conditions, including glaucoma
- Severe osteoporosis
- Pregnancy
- Artificial joints[16]

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

You may be able to practice yoga in these situations if you take certain precautions, such as avoiding certain poses or stretches. Regardless of your health status, start slowly and gently. If you develop symptoms or concerns, see your doctor to make sure you're getting the benefit and not harm from yoga.

22.8 Additional Tips to Enhance Your Yoga Experience

- Do yoga on an empty stomach. A full stomach inhibits your range of motion for many poses. A full stomach also drains your energy while your body diverts energy to digestion. Refrain from eating 2 to 3 hours before a yoga session. If you become extremely hungry before beginning yoga, experiment with a light snack such as a few nuts, yogurt, or some juice. Be sure to drink plenty of water before, during, and, most importantly, after a yoga session.
- Experience the benefits of yoga by practicing as little as 1 hour per week. The more you do it, the more you will experience its positive effects. Most yoga classes last approximately 1 hour to 1½ hours, but you can do yoga on your own for far shorter periods. The recommendation for beginners is to try to practice about 2 or 3 times per week. One positive aspect of yoga is that if you have only 10 or 15 minutes to practice, you can select a few poses and easily do them in that amount of time. It often happens that the more you do yoga, the more you will want to do longer sessions.
- When possible, practice at the same time every day. Morning is an excellent time to work out stiffness from the previous night's sleep and create energy and balance for the day. In the afternoon and evening, the muscles are warmer and looser, allowing more significant stretching.
- Go at your own pace. Don't compare your progress or your flexibility to anyone else. Where you are is excellent, and how fast you progress is fine.
- Take responsibility for your progress. If you go to a class or do yoga on your own, listen to the feedback your body gives to you. If you feel refreshed and energized after practicing *and* the following day, you are on the right track. If you have noticeable discomfort or pain at either of these times, modify or lower the intensity of your yoga practice.
- Be patient with yourself. Don't look for immediate results. Release all expectations of how you *should* be progressing, and simply let the experience of regular practice be enough. Yoga develops the body and mind at many levels, some of which may not be observable immediately. Trust the process and simply focus on regular practice.
- Enjoy the experience. Savor the pleasant feelings of stretching, breathing, and smooth body movement. Your body will give you signals that yoga is a healthy and beneficial thing to do. Experience the flood of positive feelings both during and after yoga.

22.9 Finding a Yoga Class

If you've decided to try yoga for stress management or relaxation, look around for classes in your area to see what's offered. You can also learn yoga from many online resources, DVDs, and books. Beginners usually find it helpful to learn with an instructor. Classes provide friendship and support, which are important to overall well-being.

When you find an interesting class, contact the instructor and get all of your questions answered so that you know what to expect. Questions to ask include the following:

- What are the instructor's qualifications? Where did he or she learn yoga, and how long has he or she been teaching?
- Does the instructor have experience working with students with your needs or health concerns? If you have a sore knee or an aching shoulder, can the instructor help you find poses that won't aggravate your condition?
- Is the class suitable for beginners? Will it be easy enough to follow along if it's your first time? Can you observe a class before signing up?

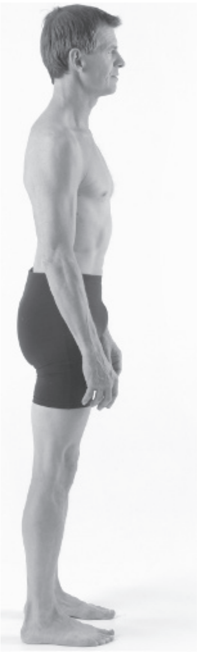
- What is the focus of the class? Is it aimed at your needs, such as stress management or relaxation, or is it geared for people who want to gain other benefits?
- What do you need to bring to class? Some classes require you to bring a mat or towel to sit or stand on while doing poses. Other courses will provide a mat.

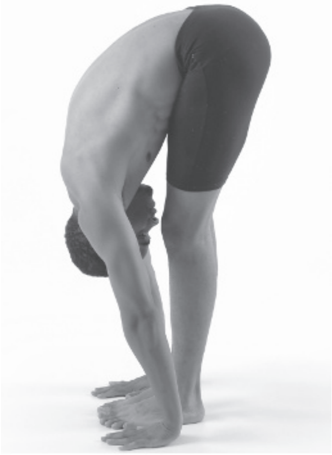
At the end of a yoga class, you should feel invigorated yet relaxed and calm. If this isn't the case, talk to your instructor. He or she might have suggestions for you. Otherwise, another yoga class may be better suited to your needs for stress management and relaxation.[16]

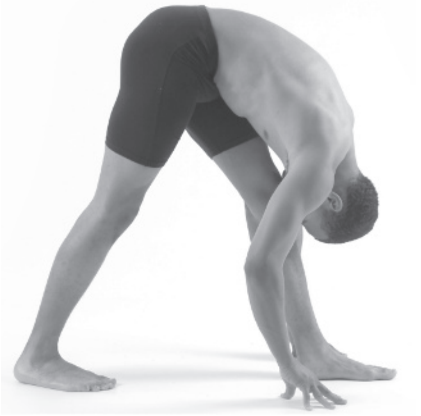
22.10 Sample Poses

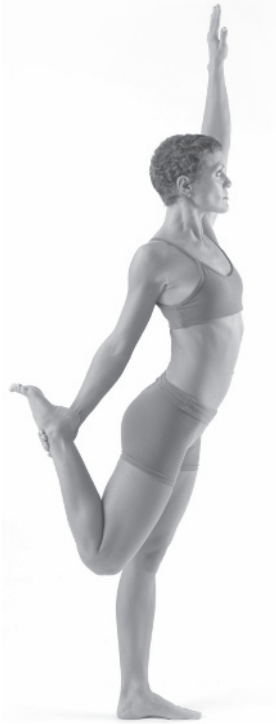
Table 22.2 shows basic yoga poses. There are many more poses than those shown here, and variations for each pose. This table has asanas that you would see at yoga classes or in yoga productions (videos, DVDs, books) available at most major bookstores and online. Figure 22.1 shows salutation to the sun, which combines several poses into a flowing sequence.

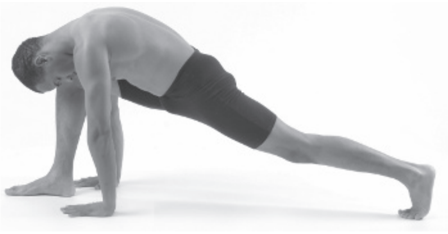
TABLE 22.2 Common Yoga Poses

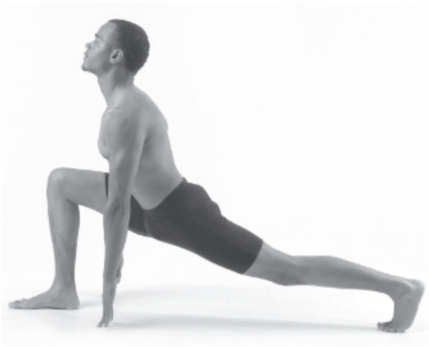

Mountain Pose

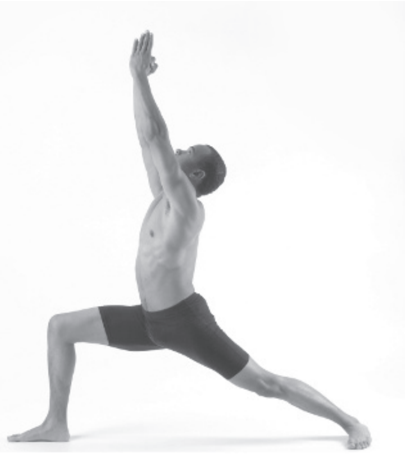

Standing Forward Bend

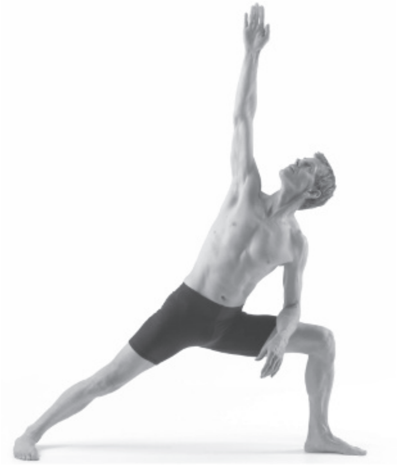

Side Angle Pose


Dancing Pose

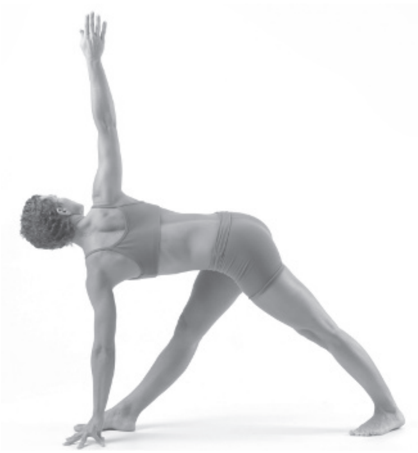

Warrior I


Warrior I (continued)

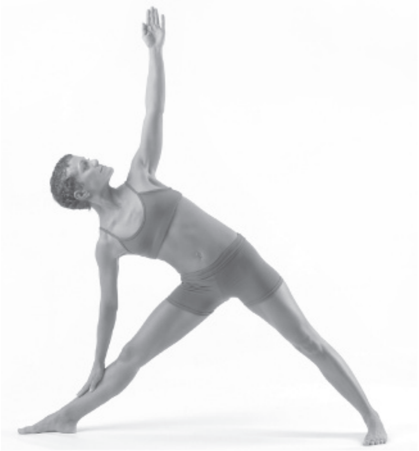

Warrior I (continued)



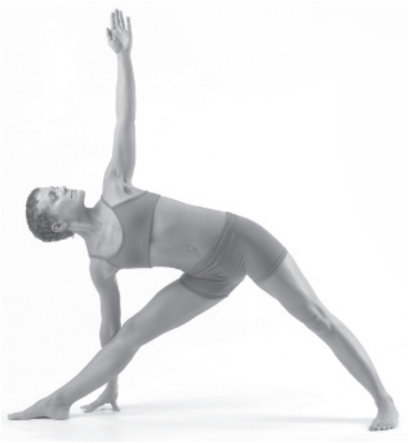
Side Angle Pose



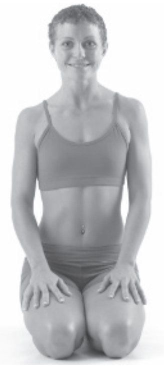
Twisted Triangle Pose



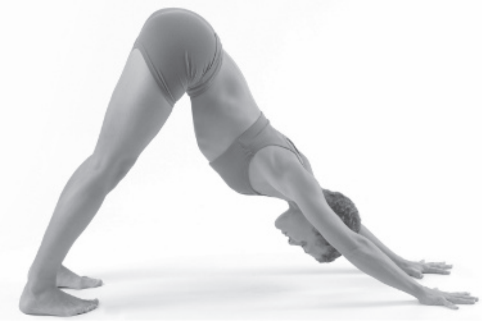
Triangle Pose



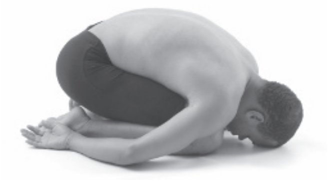
Triangle Pose II



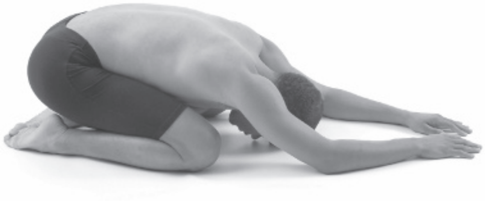
Thunderbolt



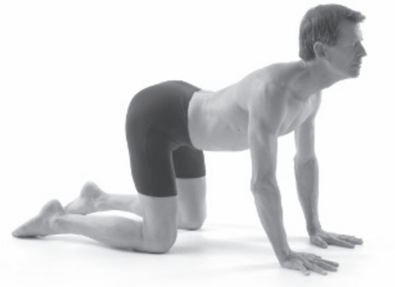
Downward Dog



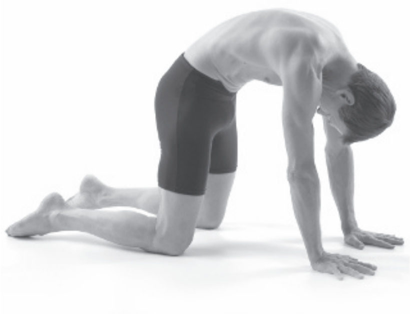
Child's Pose



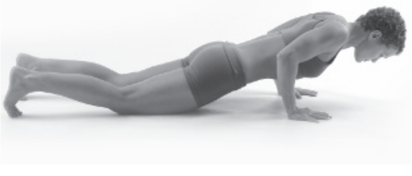
Stretched Child's Pose



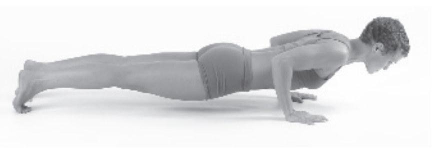
Tiger Breathing (inhale)



Tiger Breathing (exhale)

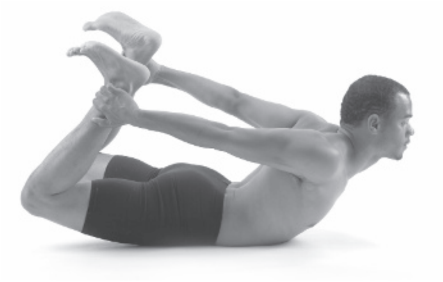


Half Boat

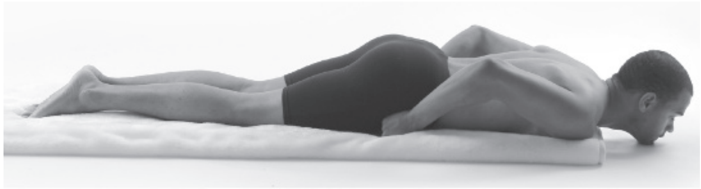


Half Boat (continued)

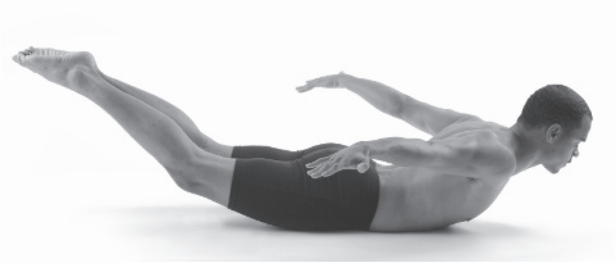
TABLE 22.2 *(Continued)*



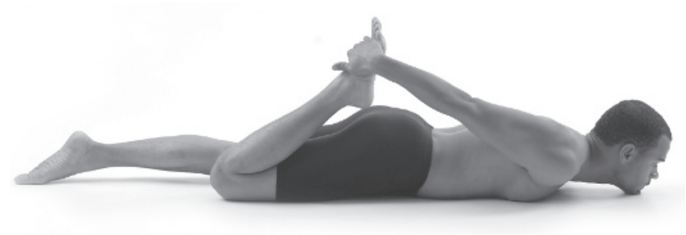
Bow



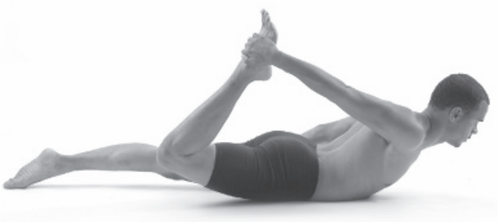
Full Locust



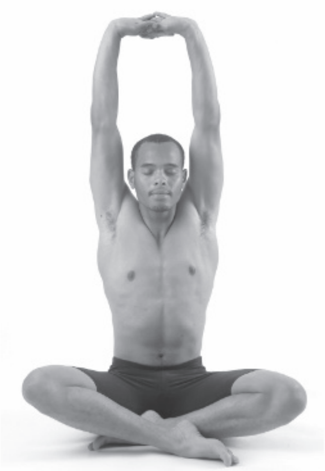
Full Locust (continued)



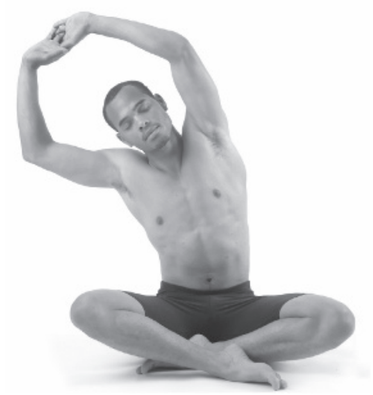
Half Bow



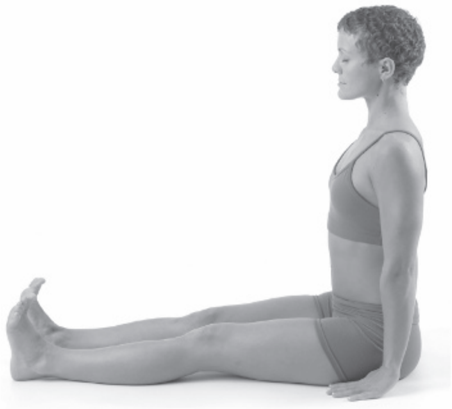
Half Bow (continued)



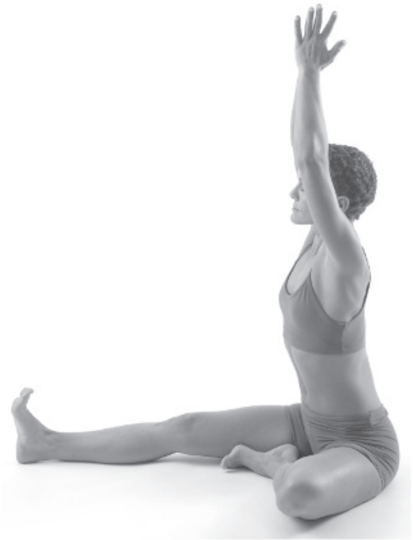
Sitting Side Bend



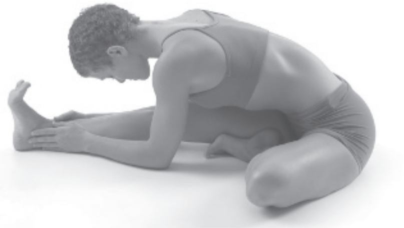
Sitting Side Bend (continued to both sides)



Staff Pose

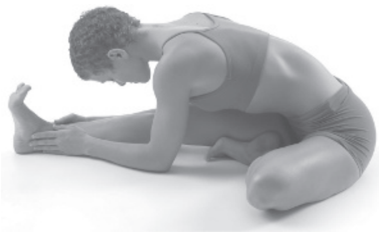


Head to the Knee

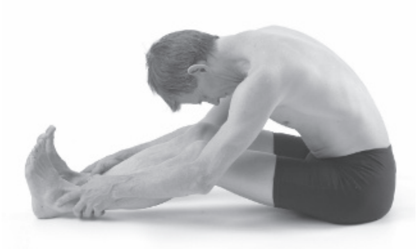


Head to the Knee (continued)

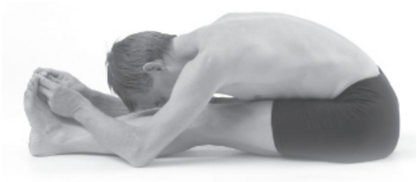
Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.



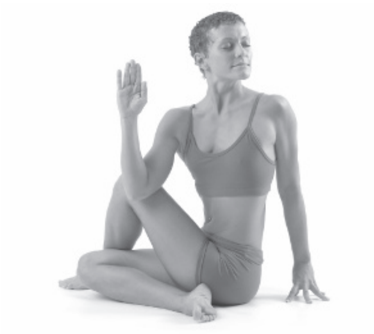
Head to the Knee (continued)



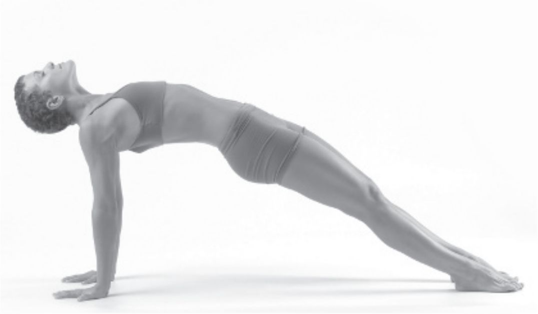
Back Stretch



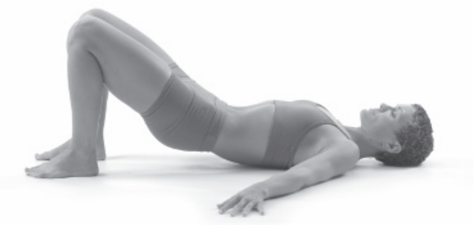
Back Stretch (continued)



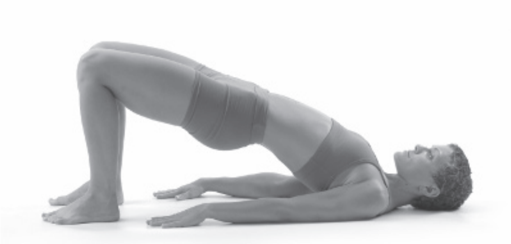
Spiral Twist (both sides)



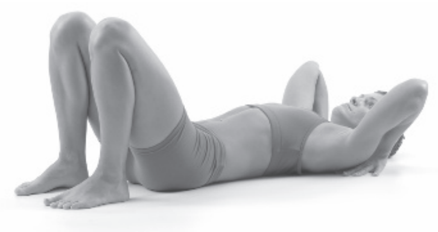
Front Body Stretch



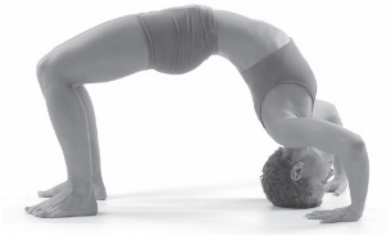
Bridge Pose



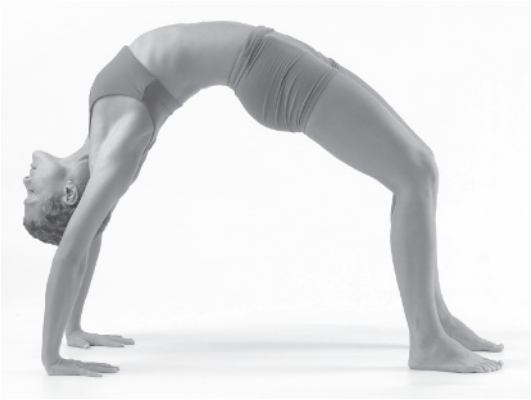
Bridge Pose (continued)



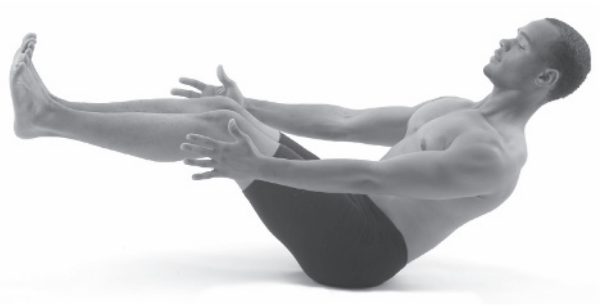
Upward Bow



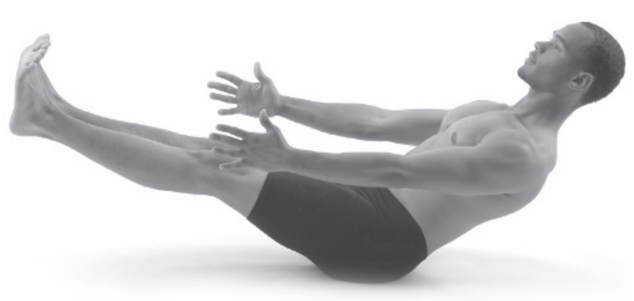
Upward Bow (continued)



Upward Bow (continued)

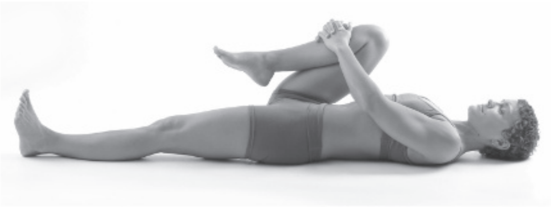


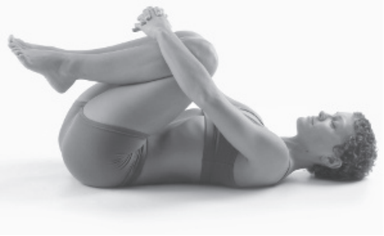
Boat Pose

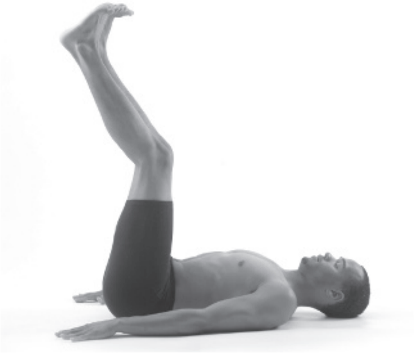


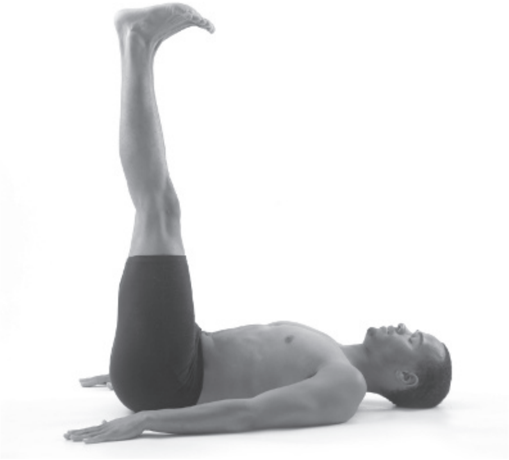
Boat Pose (continued)

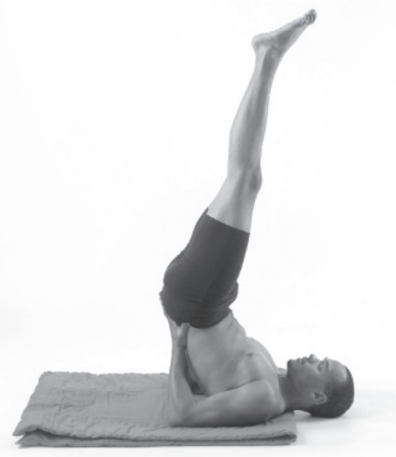
TABLE 22.2 *(Continued)*

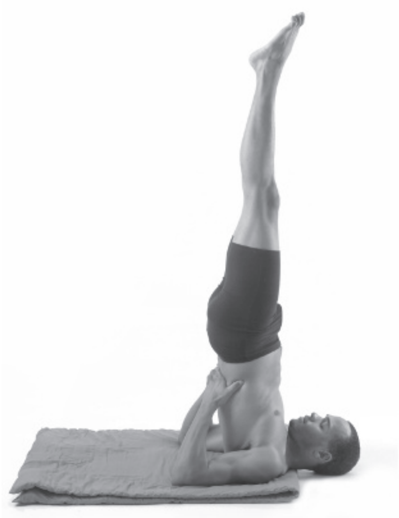

Single Knee to Chest (do each knee)

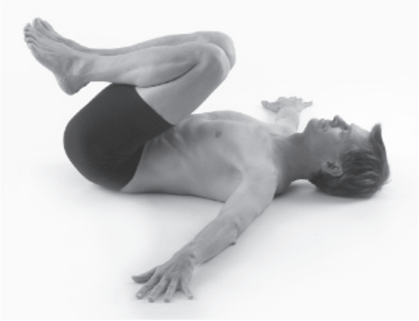

Knees to Chest

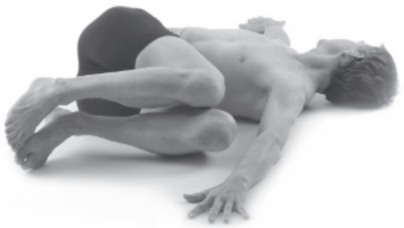

Upward Straight Legs

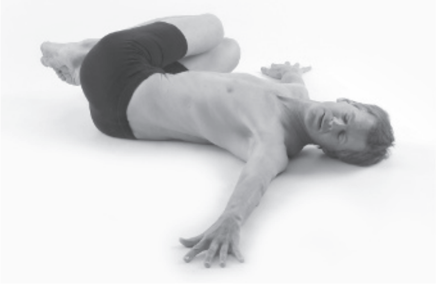

Upward Straight Legs (continued)

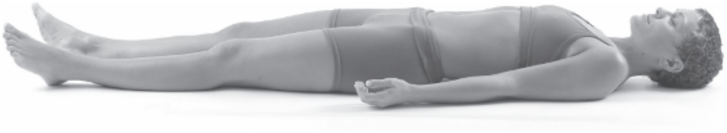

Shoulder Stand


Shoulder Stand (continued)


Belly Turning Pose


Belly Turning Pose (left side)


Belly Turning Pose (right side)


Corpse Pose

Source: *Yoga for Fitness and Wellness* (2nd ed.), by R. Dykema (Belmont, CA: Wadsworth/Cengage Learning, 2012).

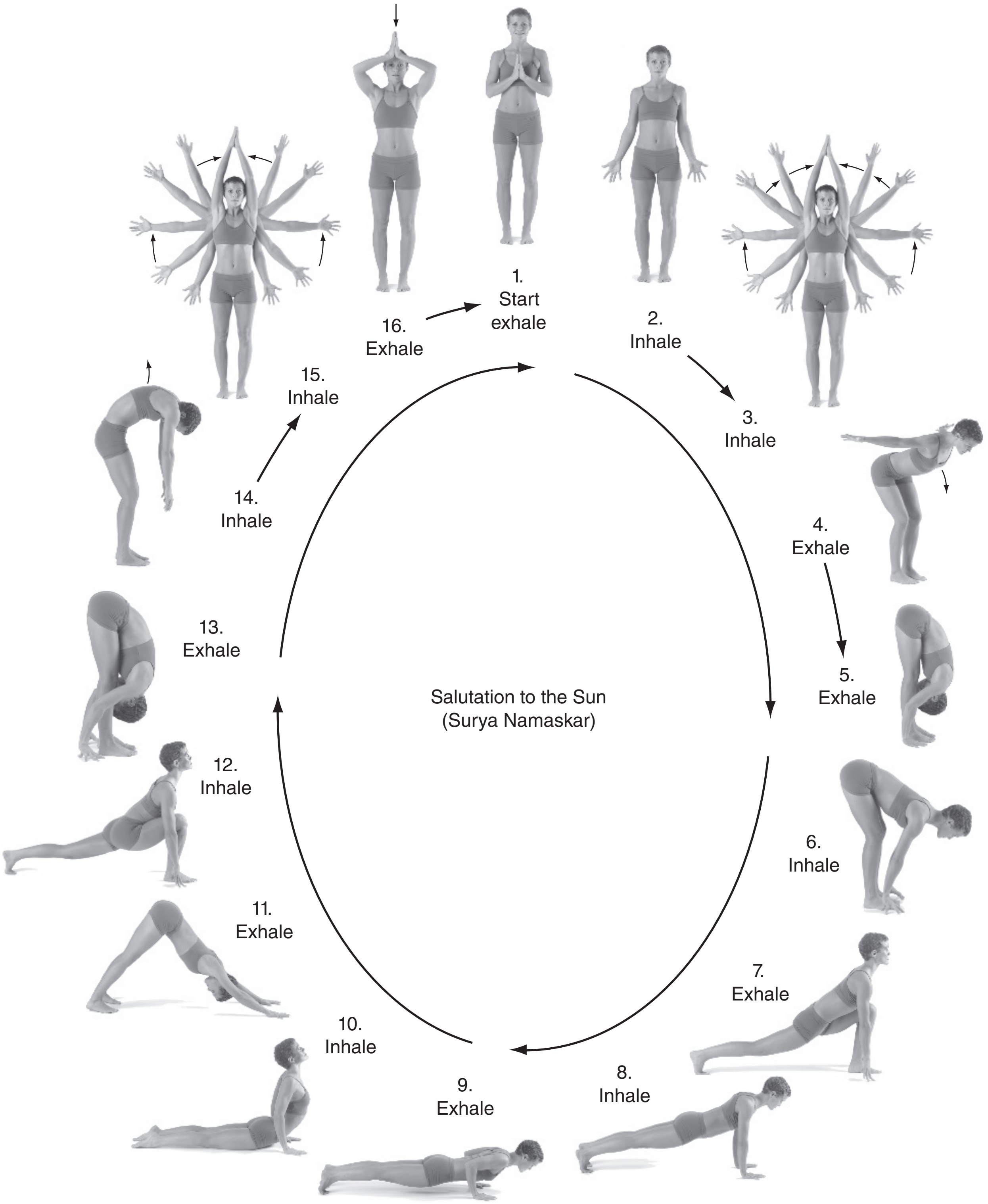

1.
Start
exhale
2.
Inhale
3.
Inhale
4.
Exhale
5.
Exhale
6.
Inhale
7.
Exhale
8.
Inhale
9.
Exhale
10.
Inhale
11.
Exhale
12.
Inhale
13.
Exhale
14.
Inhale
15.
Inhale
16.
Exhale
Salutation to the Sun
(Surya Namaskar)

FIGURE 22.1
Salutation to the Sun

Source: Yoga for Fitness and Wellness, *by R. Dykema (Belmont, CA: Wadsworth/Thomson Learning, 2006).*

As you practice these poses, try to put yourself in the same position as you see in the illustrations. The pictures show the poses being done 1 way. For example, side angle pose shows the demonstrator with his left foot forward and right foot back. Be sure to also do the opposite by switching so that the right foot is forward and the left foot is back. Do the poses both ways in every case where this can happen. At first, you will probably find that you aren't able to match the examples as presented here. With regular practice, however, your body will develop enough flexibility, strength, and balance to do them. To enhance your experience with the poses, keep in mind the suggestions and tips outlined in this chapter.

22.11 Conclusion

Yoga signifies the union of the body, mind, emotions, and spirit into a harmonious, integrated whole. Yoga has many styles and variations. Hatha yoga focuses on gentle, flowing poses, along with breathing and meditation, making it especially useful for relaxation. Yoga postures work on all dimensions of the mind and body to activate the parasympathetic nervous system and the relaxation response.

ACTIVITY

22.1 Yoga Practice

Purpose To allow you to experience relaxation through the practice of yoga.

Directions On 2 separate occasions, experiment with a variety of poses according to the instructions and pictures in the text. Follow the guidelines, tips, and pointers for proper yoga included in this chapter. Of the many poses, select at least 10 per session, and do them exactly as they appear in this chapter. Among the poses that you try, include the following simple poses:

- Standing forward bend
- Triangle pose I
- Thunderbolt
- Downward dog
- Child's pose I
- Head to the knee
- Spinal twist
- Bridge
- Belly turning pose
- Salutation to the sun (be sure to follow this carefully, as it is a series of sequential poses)
- Corpse pose (always end with this one)

Report After you have practiced yoga, respond to the following:

1. Which poses did you choose each time?
2. Which did you find difficult, easy, or impossible?
3. How did you feel before, during, and after doing the yoga sessions?
4. After doing yoga, describe how your perceptions have changed from what you perceived yoga to be before you did your sessions.

Summary Include a brief review of what you liked or did not like about yoga as a relaxation technique. Compare yoga to the other relaxation techniques you have practiced. Would you consider using this relaxation technique for stress management? Why or why not?

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

Key Points

- Yoga is a collection of exercises and postures intended to promote control of the body and mind and to reach physical and spiritual well-being.
- Yoga is thought to have originated in India over 5,000 years ago.
- Many styles of yoga exist.
- Hatha yoga consists of regulating the mind and body through breathing exercises (pranayamas) and balanced physical postures or poses (asanas) to exercise and lengthen all the muscles in the body.
- Studies find a variety of physiological and psychological health benefits from the regular practice of yoga.
- Hatha yoga is especially useful in reducing stress and restoring balance.

Key Terms

yoga
yoga sutras
yama
niyama
asana
pranayama
pratyahara
dharana
dhyana
samadhi
hatha yoga
iyengar yoga
ashtanga yoga
kundalini yoga
Bikram yoga
Kripalu yoga
Sivananda yoga
ujjayi breathing

References

1. *Yoga for Fitness and Wellness* (2nd ed.), by R. Dykema (Belmont, CA: Wadsworth/Cengage Learning, 2012).
2. "Definition: Yoga," *Webster's Online Dictionary,* retrieved March 30, 2014, from http://www.merriam-webster.com/dictionary/yoga.
3. *Book of Wisdom: Ishopanishad,* by R. Swami (Honsdale, PA: Himalayan International Institute, 1972).
4. "Origin and History of Yoga Part 1," by R. S. Grouven, retrieved November 20, 2019, from https://www.that-first.com/category/origin_and_history_of_yoga/article/origin-of-yoga/.
5. "The Four Paths of Yoga," by R. Gabriel (June 23, 2016), The Chopra Center, retrieved December 9, 2019, from https://sivanandayogafarm.org/blog/4-paths-of-yoga/.
6. "Yoga Sutras 101: Everything You Need to Know," by R. Gabriel (August 24, 2018), The Chopra Center, retrieved December 9, 2019, from https://chopra.com/articles/yoga-sutras-101-everything-you-need-to-know.
7. "Which Styles of Yoga Should You Try," Gaiam.com, retrieved July 26, 2019, from https://www.gaiam.com/blogs/discover/which-styles-of-yoga-should-you-try.
8. "Effects of Yoga on Stress Management in Healthy Adults: A Systematic Review," by C. Chong, M. Tsunaka, H. Tsang, E. Chan, & W. Cheung, *Alternative Therapies, 17*(1) (2011): 32–38.
9. "Yoga Journal Study: 20 Million Americans Practice Yoga," Yoga U Online, retrieved July 27, 2019, from https://www.yogauonline.com/yoga-news/yoga-journal-study-20-million-americans-practice-yoga.
10. "Yoga: What You Need to Know," NIH: National Center for Complemebtary and integrative Health, retrieved December 9, 2019, from https://nccih.nih.gov/health/yoga/introduction.htm.
11. "Electrophysical Correlates of Some Yogi Exercises," by B. K. Bagchi & M. A. Wenger. In L. van Bagaert & J. Radermecker (eds.), *Electroencephalography, Clinical Neurophysiology and Epilepsy,* Vol. 3 (London: Pergamon, 1959).
12. "Psychophysiological Effects of Yoga on Stress in College Students," by M. N. Tripathi, S. Kumari, & T. S. Ganpat, *Journal of Education and Health Promotion, 7* (2018): 43.
13. "Give Laughter Yoga a Try," by A. Haupt, *U.S. News and World Report*, December 2010, p. 64.
14. "Yoga-based Therapy," by C. Patel. In P. M. Lehrer & R. L. Woolfolk (eds.), *Principles and Practice of Stress Management* (2nd ed.) (New York: Guilford Press, 1993).
15. *Journey into Power*, by B. Baptiste (New York: Fireside, 2002).
16. "Yoga: Fight Stress and Find Serenity," Mayo Clinic, retrieved March 30, 2014, from http://www.mayoclinic.org/healthy-living/stress-management/in-depth/yoga/art-20044733.

chapter

23

Complementary and Alternative Health

A friend said that acupuncture helped her relax by balancing the flow of energy in her body. Does energy really flow through our bodies—and what does it have to do with reducing my stress?

I have been so stressed my doctor prescribed medication to help me calm down, but the drug has some side effects I don't want. What are some other options besides taking powerful medicines?

I've become friends with an exchange student from China. He was explaining that, when his mother was sick, she was treated with herbs, massage, and energy therapies. What's that all about, and if it works, why don't we do it in the United States?

Keren Su/The Image Bank/Getty Images

> We doctors do nothing. We only help and encourage the doctor within.
>
> —*Albert Schweitzer*

Learning Objectives

Study of this chapter will enable you to do the following:

23.1 Explain the 5 categories of complementary and alternative medicine.

23.2 Describe complementary and alternative (integrative) healthcare practices that relate to stress management within each of the 5 categories.

23.3 Discuss the stress-related health benefits of complementary and alternative healthcare.

23.4 Differentiate between several types and techniques of massage.

23.5 Contrast the typical Western medicine approach to health with alternative or integrative medical approaches to health and healing.

Real People, Real Stories

The Magic of Massage For her birthday, Valentina received from her best friend a gift certificate for a massage. As she walked into the room for her first-ever massage, she felt both excited and nervous. Her massage therapist, Diane, explained that there are several types of massage and asked Valentina what she hoped to gain from her massage. They decided that the Swedish relaxation massage best fit Valentina's needs.

As Diane began to massage warm oil over Valentina's back, Valentina felt a powerful sense of relaxation—an emotionally soothing experience accompanied by the sound of a bubbling fountain and the scent of relaxing lavender filling the warm, cozy room. Valentina could feel herself relaxing as she took a couple of deep breaths. She could hardly believe how quickly the hour passed. She couldn't remember when she had so totally allowed herself to be in the moment and surrender to the relaxation. Valentina decided at once that massage would be a regular part of her self-care routine.

23.1 Complementary and Alternative Health

> The art of healing comes from nature and not from the physician. Therefore, the physician must start from nature with an open mind.
>
> —*Paracelsus*

The variety of options and approaches to stress management presented in this chapter is impressive. Some will be familiar to you, while others may seem a bit strange, and you will hear about them here for the first time. Some originated in the United States, while many have their origins in countries and cultures around the world. The interest in complementary and alternative health has exploded as individuals look for more balanced approaches to health and healing. An estimated 60 to 90% of visits to healthcare professionals are for stress-related disorders,[1] yet many people have found that our current healthcare system is not especially useful in helping them deal with stress. People are turning to alternatives to replace or complement the "pop a pill" approach for stress and stress-related problems.

A growing body of research and the swell of public interest have raised awareness of techniques and practices such as acupuncture, biofeedback, massage, tai chi, energy therapies, and herbals. Many of these practices have been used successfully throughout history in cultures around the world to promote balance and well-being. Several, including meditation, guided imagery, yoga, music therapy, and prayer, are described in other chapters. In this chapter, we will learn about additional complementary health strategies that can help you prevent and manage stress.

23.2 Understanding Complementary and Alternative Health

Defining complementary and alternative medicine (CAM) is difficult because the field is broad and constantly changing. The National Center for Complementary and Alternative Medicine (NCCAM) is the official government agency of the National Institutes of Health that is responsible for research on CAM. NCCAM defines **complementary and alternative medicine** as a group of diverse medical and healthcare systems, practices, and products that are not generally considered part of conventional medicine (also called Western, mainstream, or allopathic medicine). The boundaries between CAM and conventional medicine are not absolute, and specific CAM practices may, over time, become widely accepted.

Complementary Versus Alternative

Many Americans use healthcare approaches developed outside of mainstream Western medicine for specific conditions or overall well-being. When describing health approaches with nonmainstream roots, people often use the words "alternative" and "complementary" interchangeably, but the 2 terms refer to different concepts:

- **Complementary medicine** refers to using a nonmainstream approach *together with* conventional medicine.

> The art of medicine consists of amusing the patient while Nature cures the disease.
>
> —*Voltaire*

- **Alternative medicine** refers to using a nonmainstream approach *in place of* conventional medicine.

True alternative medicine is not typical. Most people use nonmainstream approaches along with conventional treatments. And the boundaries between complementary and conventional medicine overlap and change with time. For example, guided imagery and massage, both once considered complementary or alternative, are used regularly in some hospitals to help with pain management.[2]

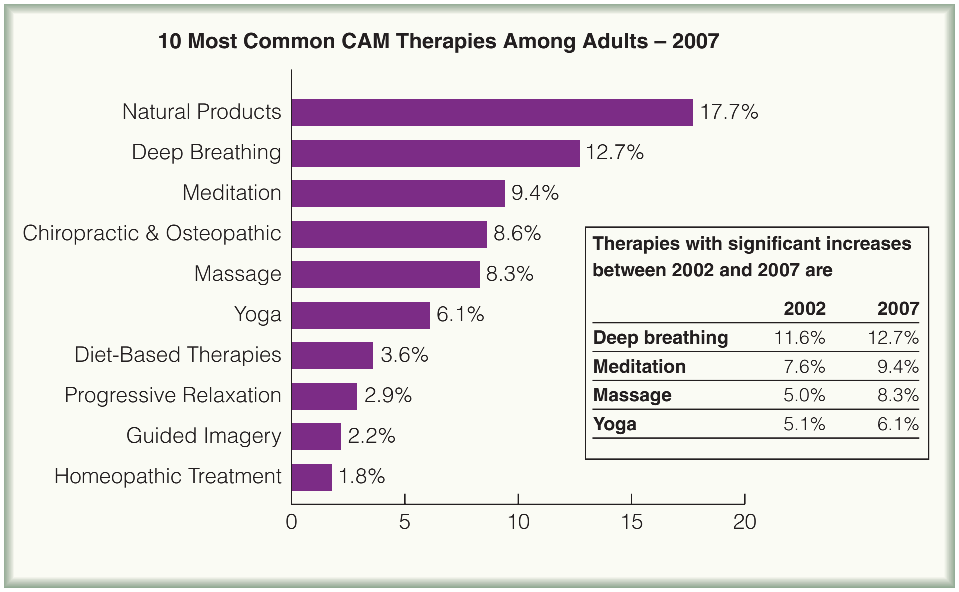
Integrative medicine (also called integrated medicine) is the current terminology used to describe practices that combine both conventional and CAM treatments for which there is evidence of safety and effectiveness.

Regardless of what you call it, the number of people using complementary and alternative health (CAH) practices is growing. Several of these practices and techniques have relevance for managing stress. A common aspect of nearly every CAH practice is the component of balance.

Most Common CAM Therapies

Many Americans use complementary and alternative medicine (CAM) in pursuit of health and well-being. The most comprehensive and reliable findings to date on Americans' use of CAM were released in 2008 by the National Center for Complementary and Alternative Medicine (NCCAM) and the National Center for Health Statistics (NCHS, part of the Centers for Disease Control and Prevention). The survey showed that approximately 38% of adults use CAM.[3]

Figure 23.1 highlights the 10 most common CAM therapies. Take special notice of the 4 therapies that saw a significant increase between 2002 and 2007. What do these therapies have in common? You guessed it: All 4—deep breathing, meditation, massage, and yoga—are often used for stress management.



Therapies with significant increases between 2002 and 2007 are

	2002	2007
Deep breathing	11.6%	12.7%
Meditation	7.6%	9.4%
Massage	5.0%	8.3%
Yoga	5.1%	6.1%

© National Center for Complementary and Alternative Medicine, NIH, DHHS

FIGURE 23.1
10 Most Common CAM Therapies Among Adults

Source: *CDC National Health Statistics Report #12. Complementary and Alternative Medicine Use Among Adults and Children: United States, 2007, by P. M. Barnes, B. Bloom, & R. Nahin © National Center for Complementary and Alternative Medicine, NIH, DHHS, December 10, 2008./© National Center for Complementary and Alternative Medicine, NIH, DHHS.*

23.3 Categories of Complementary and Alternative Medicine

NCCAM classifies CAM therapies into the following 5 categories, or domains:

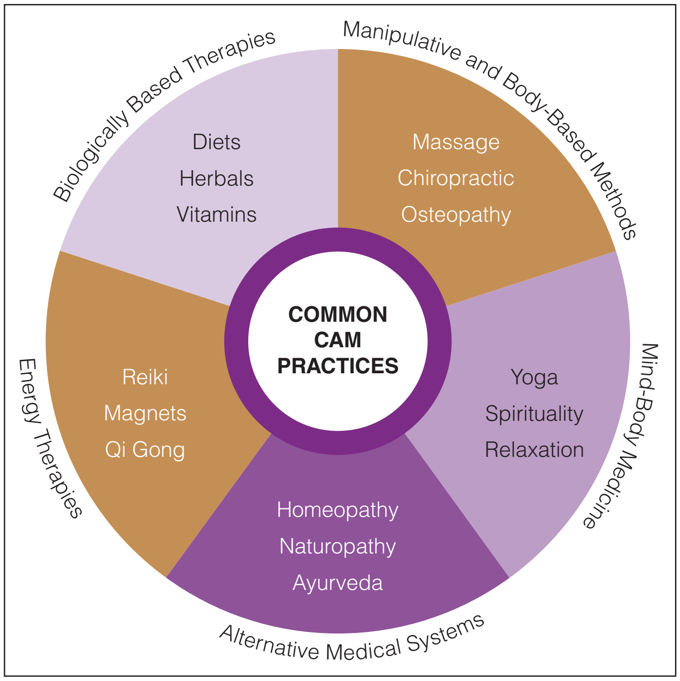
1. *Alternative medical systems.* Alternative medical systems are built upon complete systems of theory and practice. Often, these systems have evolved apart from and earlier than the conventional medical approach used in the United States. Examples include homeopathic medicine, naturopathic medicine, traditional Chinese medicine, and Ayurveda.
2. *Mind/body interventions.* Mind/body medicine uses a variety of techniques designed to enhance the mind's ability to affect the body. Some methods that were considered CAM in the past have become mainstream, like cognitive–behavioral therapy, which you learned about in Chapter 6. Other mind/body techniques include meditation, prayer, mental healing, biofeedback, and treatments that use creative outlets such as art, music, and dance.
3. *Biologically based therapies.* Biologically based therapies in CAM are substances found in nature, such as herbs, foods, and vitamins. Examples include dietary supplements and herbal products.
4. *Energy therapies.* Energy therapies involve the use of energy fields and are of 2 types:
    a. **Biofield therapies** are intended to affect energy fields that are said to surround and penetrate the human body. Some forms of energy therapy manipulate biofields by applying pressure or manipulating the body by placing the hands in, or through, these fields. Examples include qi gong, reiki, and therapeutic touch.
    b. **Bioelectromagnetic-based therapies** involve the unconventional use of electromagnetic fields.
5. *Manipulative and body-based methods.* These methods in CAM are based on manipulation or movement of 1 or more body parts. Examples include chiropractic and osteopathic manipulation and massage.[4]

FYI

The Cost of CAM

According to statistics released in July 2009 from a nationwide government survey, in 12 months, U.S. adults spent $33.9 billion out-of-pocket on visits to complementary and alternative medicine (CAM) practitioners and purchases of CAM products, classes, and materials. These statistics supply convincing evidence of the value we place on CAM modalities in America.

Source: *"Americans Spent $33.9 Billion Out-of-Pocket on Complementary and Alternative Medicine" National Institutes of Health: National Center for Complementary and Alternative Medicine, retrieved April 3, 2011, from http://nccam.nih.gov.*



National Center for Complementary and Integrative Health (NCCIH)

The 5 Categories of CAM

Source: *NCCAM, http://nccam.nih.gov*

23.4 Applications of the 5 Categories of CAM to Stress Management

Examples of some of the stress management practices that relate to each of the 5 CAM categories will convey the importance of integrative stress management practices you can incorporate into your life.

Alternative Medical Systems

Worldwide, most medical systems differ considerably from the Western healthcare approach. These systems developed separately from and before conventional medicine. The Western approach is more of a disease management system than an actual healthcare system that

CULTURE CONNECTION Culturally Based Healing Arts

Traditional East Asian medicine (such as acupuncture, shiatsu, and reiki), Indian systems of healthcare (such as Ayurveda and yoga), and Native American healing practices (such as the sweat lodge and talking circles) all incorporate the beliefs that:

- Wellness is a state of balance between the spiritual, physical, mental, and emotional "selves."
- An imbalance of forces within the body is the cause of illness.
- Herbal/natural remedies, combined with sound nutrition, exercise, and meditation/prayer, will correct this imbalance.
- When you bring the body back into balance, it will work more effectively to heal itself of most of the maladies that occurred because of the imbalance.

Source: "Alternative Approaches to Mental Health Care" by S. Gluck, retrieved July 30, 2019, from https://www.healthyplace.com/depression/articles/alternative-approaches-to-mental-health-treatment.

primarily focuses on the alleviation of symptoms. In contrast to Western medicine, alternative medical systems focus on the whole person with more emphasis placed on preventing disease.

Although it is beyond the scope of this book to discuss in detail each of the alternative medical systems, a brief description of a few of them will help you compare and contrast the Western medicine approach to traditional therapeutic approaches. As you read about the various medical systems, think about how the strategy would affect the treatment of stress-related conditions.

Traditional Chinese Medicine (TCM) **Traditional Chinese medicine** is the contemporary version of the 3,000-year-old medical practice of China. TCM includes a variety of carefully formulated techniques such as acupuncture, herbal medicine, massage, qi gong, and nutrition.

Ayurvedic Medicine **Ayurveda,** India's traditional system of natural medicine, is claimed to be the oldest system of natural healing on Earth. Ayurveda (*a*yur = life, *v*eda = science or knowledge) is "knowledge of how to live." Asians have practiced this holistic form of medicine for approximately 5,500 years, and it now is gaining interest in Western countries, including the United States.

An integral component of Ayurvedic medicine is teaching people how to release stress and tension through meditation and yoga, which you read about in Chapters 21 and 22. Taking a holistic approach to the individual, Ayurveda believes that all facets of life contribute to health—including nutrition, hygiene, sleep, weather, and lifestyle, as well as physical, mental, and sexual activities. It also considers emotional factors, like anger, fear, anxiety, and unhealthy relationships, which contribute to illness. A healthy emotional state is the very foundation of physical health.[5]

Naturopathic Medicine **Naturopathy** encompasses the diagnosis, treatment, and prevention of disease, as well as the promotion of health. One of the oldest forms of medicine, naturopathy combines the healing traditions of China, India, Greece, and Native American cultures with modern scientific principles and technology. Treatment is individualized, with considerable time and attention devoted to lifestyle counseling. Naturopathic medicine makes recommendations on diet, exercise, and stress management. Modern naturopathy is founded on 6 basic principles:[6]

1. *Nature has the power to heal.* The physician's role is to support the self-healing process by removing obstacles to health.
2. *Treat the whole person.* A disease rarely has a single cause, so every aspect of the patient must be brought into a harmonious balance.
3. *First, do no harm.* A physician should use methods and substances that are as nontoxic and noninvasive as possible.
4. *Identify and treat the cause.* Rather than suppress symptoms, the physician should address the underlying causes of disease.
5. *Prevention is as important as a cure.* A physician should help create health, as well as cure disease.
6. *Doctors should be teachers.* Part of the physician's task is to educate the patient and encourage self-responsibility.

Clearly, most of these alternative medical systems emphasize the wholeness of body, mind, and spirit, and the unity of the individual with the natural environment. This is in sharp contrast to Western medicine's mechanistic approach, in which the body is viewed as a machine with parts to fix when they break. The main focus of Western medicine is on the treatment of disease, often with drugs and surgery, rather than on the holistic promotion of health.

FYI

Traditional Chinese Medicine — Growing in Popularity

More people than ever before use traditional Chinese medicine (TCM), and the trend is headed toward continued use. Women use TCM more than men, and people in the 35–to 49-year-old age group use TCM more than other age groups, but the 20–to 34-year-old age group had the highest increase in popularity from 2000 to 2010 than any other age group.

Source: *"The Trends of Utiliztion in Traditional Chinese Medicine in Taiwan from 2000 to 2010: A Population-Based Study," by Y. Yeh, Y. Chou, N. Huang, C. Pu, & P. Chou,* Medicine, *95*(27) *(2016): e4115.*

Mind/Body Interventions

A clear connection exists between mind/body interventions and stress management. Considerable research supports mind/body interventions, such as meditation, and its impact on stress management and health. Increasingly, meditation is no longer considered a CAM practice but, instead, a mainstream practice. Approaches such as prayer, cognitive techniques, and music therapy have been discussed in other chapters.

A mind/body intervention not previously discussed is biofeedback. **Biofeedback** is a method that uses electronic devices to help a person learn how to consciously regulate physical functions, such as breathing, heart rate, muscle tension, skin temperature, and blood pressure, in order to reduce stress. The electronic instruments accurately measure, process, and "feed back" information about autonomic nervous system activity, allowing the development of voluntary control over physiologic processes.[6]

> The natural healing force within each one of us is the greatest force in getting well.
>
> *—Hippocrates*

Since the 1970s, research has shown that humans can gain control over several autonomic nervous system functions. This discovery—that people can control internal physiologic activity—has had profound implications for health. As stress levels go down, so do symptoms of chronic stress. Biofeedback is used to eliminate headaches, recondition injured muscles, control asthmatic attacks, and relieve pain. It is also proving to be an effective treatment for other stress-related problems, including anxiety, Attention-deficit/hyperactivity disorder (ADHD), chronic pain, constipation, epilepsy, headache, hypertension, motion sickness, Raynaud's disease, and temperomandibular disorder.[7]

Here are descriptions of several types of biofeedback.

Electromyogram (EMG) EMG, the most common form of biofeedback, uses electrodes or other sensors connected to the forehead, jaw, or shoulder muscles, to measure muscle tension. When the electrodes sense tension, the biofeedback machine produces a signal such as a sound or a colored light. Thus alerted to muscle tension, you begin to sense how it feels, so you can immediately do something to relax the tension. EMG promotes relaxation of the muscles involved in backaches, headaches, neck pain, and grinding teeth (bruxism).

Temperature Biofeedback A common symptom of the stress response is a decrease in skin temperature in the hands and feet. Sensors attached to your fingers detect skin temperature levels and can alert you when the stress response has been activated. When you're under stress, a low skin temperature reading can give you immediate feedback that it is time to relax.

Galvanic Skin Response (GSR) Like a lie detector machine, GSR sensors measure the activity of your sweat glands and detectable amounts of perspiration on the skin. The GSR biofeedback device senses the increase in this physiology and gives immediate feedback to the user.

Electroencephalogram (EEG) An EEG uses sensors placed on the scalp and linked to a computer with an EEG-biofeedback instrument to monitor brainwave activity associated with different mental states such as heightened stressful alertness, normal wakefulness, relaxation, calmness, light sleep, and deep sleep (the beta, alpha, theta, and delta

ABO PHOTOGRAPHY/Shutterstock.com

Biofeedback can help you learn to control autonomic functions.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

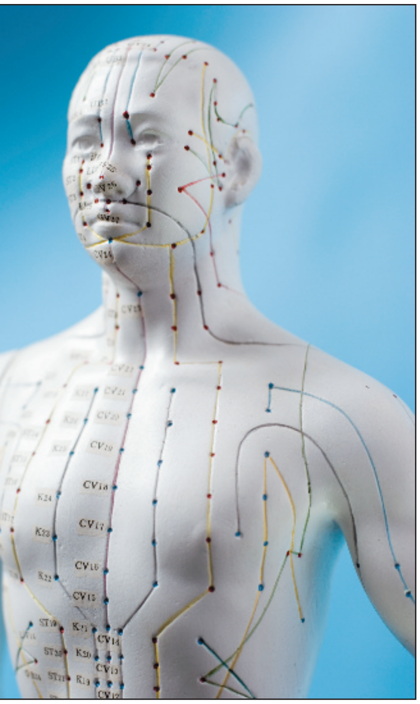
brainwaves). An increase in the strength of frequencies of this signal means a person is functioning at a specific mental state. For example, slow-wave patterns or theta waves indicate that the person being monitored is probably asleep or in deep meditation. If the quicker beta waves are the most prominent, the person is wide awake and possibly experiencing moderate to high levels of stress.

Biofeedback for Stress Reduction There are many products and devices to help you explore the fascinating world of biofeedback. These devices help you relax and are enjoyable to use. They often come with games or activities that turn the process of relaxing into an exciting adventure or a fun challenge, for example, FreezeFramer and Journey to the Wild Divine. As you connect to the computer, you are guided through activities that help you learn to focus your thinking in more relaxing ways. As technology continues to advance, we will continue to see more ways to enhance communication between the mind and body.

Here is an example of how biofeedback might look if you were to try it. Imagine that you are sitting in front of a computer, and you have one or more of your fingers comfortably connected to a "sensor" that is attached to your computer.

You see on your computer screen an animated person juggling some colorful balls. You are instructed to think happy, peaceful thoughts. As you do, the person juggling the balls begins tossing them higher into the air.

To experiment, you decide to think of a recent argument in which you got angry. As you dwell on the discussion and relive it in your mind, you notice that as you get more enraged, the juggler tosses the balls lower and lower in the air, until he is just holding them still. As you practice, you see the connection between the way you think and the height of the juggled balls.



Orrza/Shutterstock.com

Meridians are energy pathways that flow throughout the body. In Chinese healing theory, when a person has a sickness, the underlying cause of the problem is thought to be a blockage of energy flowing through the meridians.

Realizing that your thoughts have made this happen, and not feeling so well because you've just relived an unpleasant event, you decide to apply relaxation imagery to imagine the most pleasurable, delightful experience you've ever had. Perhaps it happened on a recent vacation. It was a time when you felt incredibly relaxed, happy, and peaceful. As you dwell on this new picture in your mind, the juggler begins to toss the balls high into the air again. You have just seen the clear connection between mind and body.

Biofeedback devices often are used in conjunction with deep breathing, meditation, or guided imagery to monitor the ability of these techniques to reduce the stress response. Again, biofeedback is merely a means of supplying information concerning the body and relaxation; it does not take the place of relaxation techniques. Once individuals learn to relax using biofeedback, they can forego the unique instrument and rely upon breathing, visualization, or 1 of the many forms of meditation.[6]

Biologically Based Therapies

Ongoing research is exploring the connection between natural substances, such as herbs, dietary supplements, and vitamins, and stress and anxiety relief. Among American consumers, herbs are popular to help the body adapt to physical and emotional stressors. Ginseng, for example, is often used to induce relaxation. Valerian is an herb commonly consumed as a tea to enhance sleep.[8]

The herb kava may reduce anxiety and induce sleep. Although kava is useful for treating stress, the Food and Drug Administration has issued a consumer advisory warning of a possible association between kava products and liver problems. This effect is still under investigation but serves as a reminder that biologically based products can have powerful effects, both positive and negative.

People must use caution when taking herbals or other biologically based therapies. Although compelling evidence shows that some of these products are effective for inducing relaxation, adequate studies often have not been conducted to determine potential side effects or contraindications with other drugs.

Energy Therapies

Energy therapies involve the manipulation of energy fields, including **meridians**—invisible channels of energy that flow in the body—or energy fields outside the body. In Chinese healing theory, vital energy called *chi* (also called *qi*)—which sustains life, and from which all other activities spring—flows through the body of each person by way of meridians. When a person has a sickness or disease, the underlying cause of the problem is thought to be a blockage of this flowing energy in the meridians. The therapy releases the blockage and restores the energy flow to healthy, highly functioning levels. Some techniques, such as reflexology and shiatsu, combine energy balance with massage.

Reflexology is based on the Asian theory that meridian lines or pathways carry energy throughout the body, with points in the hands and feet that correspond to all areas of the body. Because each zone or part of the body has a corresponding reflex point on the feet, stimulating that reflex point with pressure causes the natural energy of the related organ to be restored. If a specific area feels tender when pressure is applied, this may indicate a dysfunction in the corresponding part of the body. Continued gentle pressure is applied to these locations (see Figure 23.2) on the feet and hands to restore normal functioning and health.

Four related energy therapies are acupuncture, acupressure, emotional freedom technique (EFT), and shiatsu. These therapies are intended to open the flow of chi, restore balance, and support the natural healing of the body. Feelings of deep relaxation and increased vitality are common benefits of these treatments.

1. **Acupuncture** involves inserting hair-thin, sterile needles into the body at specific points (acupoints) to manipulate the body's flow of energy and balance its systems. This manipulation is believed to regulate functions such as heart rate, body temperature, and respiration, as well as sleep patterns and emotional changes such as the relief of stress,

FYI

Acupuncture in Action

Acupuncture has been used at the Mayo Clinic since the 1970s. The Mayo Clinic has licensed acupuncturists on staff. When appropriately performed by trained practitioners using sterile needles, acupuncture is a safe and effective therapy. A review of acupuncture by the World Health Organization found it was an effective treatment for 28 conditions, and there was evidence to suggest it may be useful for several more.

Source: Mayo Clinic Book of Alternative Medicine *(2nd ed.), by B. Bauer (New York: Time Inc., 2010).*

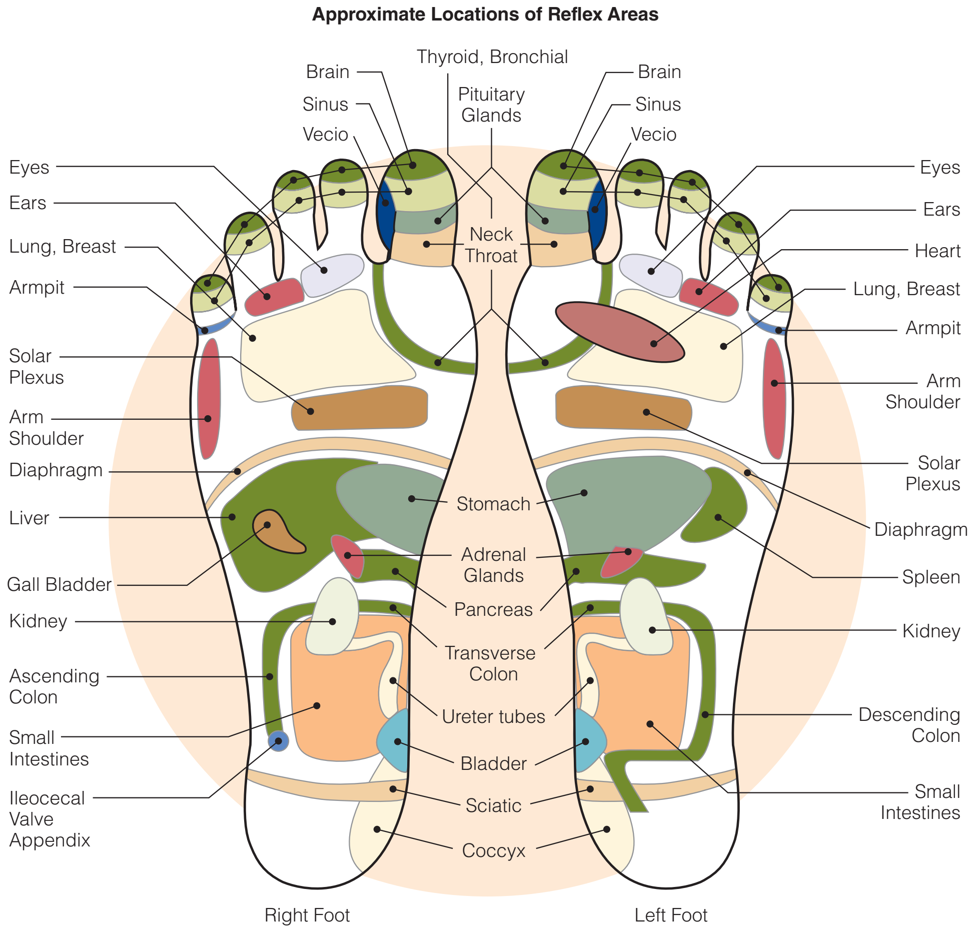
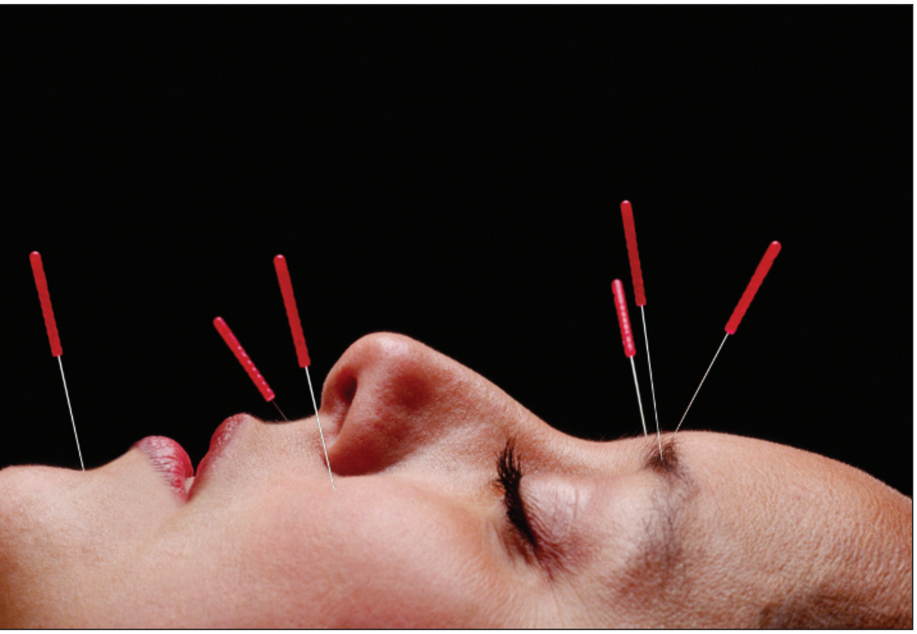

Approximate Locations of Reflex Areas
Brain
Sinus
Vecio
Thyroid, Bronchial
Pituitary Glands
Brain
Sinus
Vecio
Eyes
Ears
Lung, Breast
Armpit
Solar Plexus
Arm Shoulder
Diaphragm
Liver
Gall Bladder
Kidney
Ascending Colon
Small Intestines
Ileocecal Valve Appendix
Neck Throat
Stomach
Adrenal Glands
Pancreas
Transverse Colon
Ureter tubes
Bladder
Sciatic
Coccyx
Eyes
Ears
Heart
Lung, Breast
Armpit
Arm Shoulder
Solar Plexus
Diaphragm
Spleen
Kidney
Descending Colon
Small Intestines
Right Foot
Left Foot

FIGURE 23.2
Reflexology: Approximate Locations of Reflex Areas

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.


John Lund/The Image Bank/Getty Images

Acupuncture involves inserting hair-thin, sterile needles into the body at specific points to manipulate the body's flow of energy and restore the balance of chi, the vital energy or life force flowing through the meridians.

depression, and anxiety.[9] In the 2007 National Health Interview Survey, an estimated 3.1 million U.S. adults reported recently using acupuncture.

Although scientists are not sure how acupuncture works, theories suggest that it corrects the balance of chi, the vital energy or life force flowing through the meridians. These meridians are linked to specific organs and organ systems. Although needles are the standard method of application, practitioners also may apply heat, pressure, friction, suction, or impulses of electromagnetic stimulation to the needle points.

2. **Acupressure** often is described as acupuncture without the needles. Pressure is applied to pressure points thought to be areas of chi concentration.
3. **Emotional freedom technique (EFT)** is an alternative therapy based on the theory that negative emotions are caused by disturbances or blockages in the body's flowing energy systems. Tapping on the meridian endpoints on the face and body while focusing on a current negative emotion or physical problem opens the energy pathway where the blockage is said to be. Stimulating specific energy points by gently tapping on specific acupressure points releases the existing block. As the flowing energy is brought back into balance, the symptoms of the imbalance tend to cease. EFT is a newer form of energy therapy, but the healing effects of this modality show positive results with a variety of physical and emotional problems.
4. **Shiatsu** means "finger pressure" in Japanese. It originated as a blend of acupuncture and traditional Japanese massage. This system of finger pressure is applied to specific points along acupuncture meridians.

Monika Wisniewska/Shutterstock.com

Emotional freedom technique works like acupuncture and acupressure by clearing energy blockages in the meridians.

There are 4 other energy therapies relevant to stress management:

1. **Qi gong** (pronounced chee gong or chee gung), a Chinese exercise involving physical movement and breathing exercises designed to circulate vital energy.
2. **Tai chi,** a branch of qi gong and the most popular form of exercise in China, consists of a precise sequence of slow, graceful movements accompanied by deep breathing and mental attention. It aims to achieve a balance of body and mind and to focus vital energy. Tai chi is also considered a mind/body technique.
3. **Therapeutic touch** is based on the principle that the human body is surrounded by and permeated with an energy field connected to universal life energy. Therapeutic touch may or may not involve physical contact, but contact is always made with the client's energy field. For the practitioner, intentionality (compassionate, focused attention on the recipient) is the most important factor in healing. There is some impressive anecdotal evidence that therapeutic touch works. The National Institutes of Health is sponsoring research on the possible effects of therapeutic touch in treating symptoms such as pain, fatigue, depression, and stress.
4. **Reiki (RAY-kee)** is a healing technique in which the practitioner channels the universal life energy to recipients through his or her hands to raise the amount of qi in and around the recipient. There are many forms of reiki. A complete treatment typically involves placing the hands on the head and shoulder area, and then the stomach area, ending with the feet. The underlying belief is that healing energy can be transferred from a practitioner to a recipient.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

STRESS STORIES

Acupuncture and Cluster Headaches

While I was in graduate school, I lived next door to another graduate student who had incredibly painful cluster headaches (he said a cluster headache feels like a migraine headache multiplied by ten). He told me that sometimes he wanted to shoot himself and end it all because the pain was so intense. Nothing seemed to work to make the headaches go away. No doctor in Illinois had any answers for him, and no drug seemed to work.

A woman in the department where he was working on campus happened to mention to him that she was an acupuncturist and would be happy to do what she could to help him. He told me he was so desperate that he was willing to try anything. I asked if I could watch it when she came to his house, as I had never seen acupuncture done and was curious.

While my friend was lying on the couch in his living room, I watched the woman put needles into various places in his body—his feet, his ears, his eyebrows—locations that to me had nothing to do with an aching head. When it was over, he told me that the pain he had felt in his head was mostly gone. She returned for a follow-up session.

In the following weeks and months, I asked my neighbor if the cluster headaches ever returned. He said he hadn't felt any pain since the acupuncture treatments. In the time that I lived next to him, he never mentioned cluster headaches again.

—MO

Manipulative and Body-Based Methods

Several practices used to reduce stress fall under the category of manipulative and body-based methods. Some benefits of these methods relate to something as seemingly simple as a touch. We will begin by exploring the benefits of touch and massage.

Muscle Tension Take your thumb and push in on your thigh with reasonable force. Notice if you feel any pain. Now, with your thumb or forefinger, push with an equal force somewhere between your neck and shoulder on one of those "rope-like" muscles that feel noticeably hard. If you are like many of us, you will feel more discomfort when you press on your neck and shoulder muscles. This is because stress-related tension can become chronic and often settles into the muscles of the upper back and shoulders. Again, muscles become tense with activation of the fight-or-flight response. Because these muscles keep a constant state of activation, they are chronically contracting. When this happens, the muscles contact pain receptor nerves, and we feel muscle pain.

Another outcome of chronically tensed muscles is fatigue. To understand this, try to hold your arm outstretched for a long time. Soon the tightened muscles that hold up your arm become tired and painful. This is the case with many muscles in our body; staying in a constant state of contraction, they become sore and fatigued, and as a result, we feel tired and exhausted.

The purpose of massage is to work on these tension-packed muscles, to relax the muscles directly by pressure and rubbing. As massage is applied to muscles, they relax, and the pain receptor nerves are no longer being stimulated by the tensed, contracting muscles. At least 2 beneficial outcomes result:

1. Pain is relieved.
2. The energy being used to tense the muscles is freed to be used elsewhere in the body.

Touch and Massage Touch has both physical and emotional benefits, making it essential for managing stress and improving health. Touch has been found to enhance heart irregularities. People with a specific type of irregular heartbeat reached a more regular rhythm in the minute after they were touched as their pulse was being taken. Touch has also been found to relieve depression. Children and adolescents who were hospitalized for depression scored better on depression and anxiety measures after receiving daily massage.[10]

Researchers from the University of Miami Medical Center found that massage helps babies handle the increased stimulation

FYI

Tai Chi: Meditation in Motion

In a study looking at the effects of tai chi on both blood pressure and waist circumference, participants practiced for 60 minutes, 5 sessions per week, for a total of 6 weeks. Compared with a non-practicing control group, tai chi significantly reduced both blood pressure and waist circumference of the group who practiced tai chi. Maybe it should be called "medication in motion."

Source: *"The Effects of Tai Chi on Waist Circumference and Blood Pressure in the Elderly," by Y. M. Lee, Journal of Physical Therapy Science, 29(1), (2017): 172–175.*

after leaving the womb, and it helps them relax when they experience stress.[11] In the study, premature infants were massaged for 15 minutes 3 times a day over 10 consecutive days. The babies who were touched:

- Averaged 47% greater weight gain per day than the premature infants who were not massaged
- Were more active and alert and showed more neurological development than the premature infants who didn't receive massage
- Required 6 fewer days in the hospital than the control group[12]

Dragonlmages/iStock/Getty Images

Therapeutic touch is based on the premise that the human body is surrounded by and permeated with an energy field that is connected with the universal life energy.

Typical Benefits of Therapeutic Massage Therapeutic massage typically leads to physical, mental, emotional, and other benefits.

1. *Physical benefits.* Massage therapy is intended to stretch and loosen tight muscles. It can:
    - Loosen joints and improve range of motion
    - Relieve cramps and muscle spasms
    - Reduce muscle fatigue
    - Improve blood flow and the movement of lymph throughout the body
    - Enable the removal of metabolic waste resulting from exercise or inactivity
    - Increase the flow of oxygen and nutrients to cells and tissues, which speeds healing from injury or disease
    - Relieve symptoms of disorders such as headache, chronic and acute pain, asthma, arthritis, carpal tunnel syndrome, temporomandibular joint (TMJ) dysfunction, and athletic injuries

    Also, massage stimulates the release of endorphins, the body's natural painkiller.
2. *Mental benefits.* Massage therapy provides a relaxed state of alertness, reduces mental stress, and enhances the ability for calm thinking and creativity. Massage also can improve the duration and quality of sleep and increase the ability to concentrate.
3. *Emotional benefits.* Massage therapy satisfies some of the need for caring and nurturing touch. It can improve feelings of well-being, and it reduces anxiety.
4. *Added benefits.* Massage can help combat the adverse effects of aging by enhancing tissue elasticity, improving immune system functioning, and relieving muscle aches and stiffness. Athletes and other performers use massage to help them relax, prepare for performances, and accelerate repair from injury. After receiving a massage, people often report feeling lighter, more energized, and more peaceful.

STRESS STUDIES

When Someone's in Pain, Extend Your Hand

In a study published in the journal *Scientific Reports*, researchers recruited 22 long-term heterosexual couples, age 23 to 32, to see if empathetic physical touch can weaken physical pain.

The couples were arranged in 3 different ways: sitting together without touching, sitting while holding hands, and sitting in separate rooms. The women of the study were subjected to a mild heat pain on the arm for 2 minutes while their partners sat nearby watching their partner receive the mild heat. During each administration of the mildly intense heat, the heart rate and breathing rate of the men and women were measured.

When the couples sat nearby each other or in separate rooms, their breathing rates and heart rates did not show significant synchronization, nor was there any noticeable reduction in pain. However, when the couples held hands while the women received the heat, the heart rates and breathing rates of the couples began to synchronize, and the women of the study reported significantly less pain.

One of the authors of the study said that these results suggest "touch is a tool for communicating empathy, resulting in an analgesic, or pain-killing effect."

Source: *"The Role of Touch in Regulating Inter-Partner Physiological Coupling during Empathy for Pain," by P. Goldstein, I. Weissman-Fogel, & S.G. Shamay-Tsoory,* Scientific Reports, 3252 *(2017).*

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

STRESS STORIES

Therapeutic Touch

I sat in the chair with my eyes closed as my friend, Teresa, an RN who was also trained in therapeutic touch, passed her hands about 2 inches from the surface of my entire body. She didn't physically touch me. She said she was connecting with me at more energetic levels. I didn't understand what that meant, but it seemed harmless.

After about 15 minutes of this, she said she was finished. I thanked her and walked back to where my bike was parked so I could head home.

As I got on my bike, I had the most incredible feeling. It was like someone had opened up the top of my head and poured in pure energy. I had to get moving!

I felt ignited as I headed home. When I arrived at our apartment, I told my wife I needed to go for a ride. For the next 2 hours, I rode my bike at top speed through a nearby forest with lots of biking trails. I don't recall ever having so much energy. Even after 2 hours of all-out effort, I still didn't feel tired when I finished.

I called Teresa on the phone later that evening to ask her what had happened. She told me those types of experiences frequently happen after she works on people. I can't explain it, but the effect was nothing short of profound.

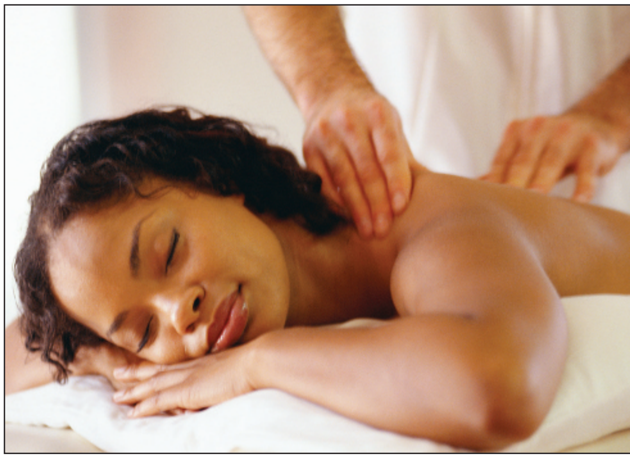
—MO

23.5 Types of Massage

The most common type of relaxation massage is Swedish massage.

Swedish Massage

Dr. Pehr Henrik Ling, a Swedish doctor, developed this first modern method of massage in the 1820s through his study of physiology, gymnastics, and massage techniques borrowed from China, Egypt, Greece, and Rome. **Swedish massage** usually is done with lotions or oils and includes long, gliding strokes; kneading; friction; tapping; and shaking motions on the upper or more superficial layers of the muscles. Swedish massage affects nerves, muscles, glands, and circulation and promotes health and well-being.



Jose Luis Pelaez, Inc./Flame/Corbis

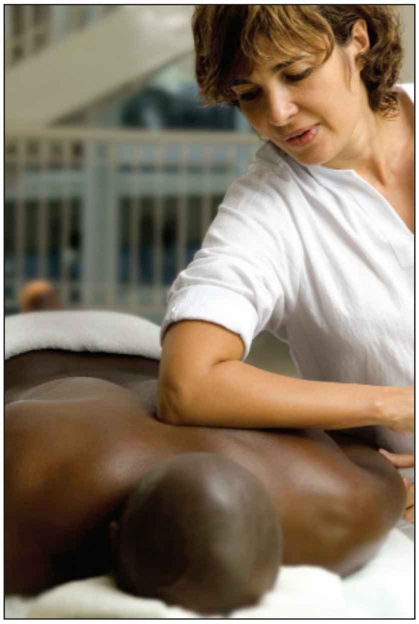
Swedish massage includes long, gliding strokes, kneading, friction, tapping, and shaking motions on the upper or more superficial layers of the muscles.

Other bodywork modalities include the following.

Deep tissue massage involves the release of chronic patterns of tension in the body through deep muscle compression with the heel of the hand, the pads of the thumb, and even the elbow pressing deliberately along the grain of the muscle. With continuous pressure, deeply held patterns of tension, as well as toxins, can be released.

Myotherapy, also known as trigger-point therapy, is designed to reduce pain, relax muscle spasms, and improve circulation. Trigger points are hard knots of muscle tension that often cause pain in some regions of the body. When a trigger point is under excessive emotional or physical stress, it can result in painful muscle spasms. Spasms, in turn, cause pain. Trigger points are released or erased by intense pressure applied to the trigger points for a short time (several seconds to 2 or 3 minutes) by the fingers, knuckles, and elbows.

Craniosacral therapy (CST) is a gentle, hands-on method of evaluating and enhancing the function of a physiological body system called the craniosacral system. The craniosacral system is made up of the membranes and cerebrospinal fluid that surround and protect the brain and spinal cord and sustain the environment in which the nervous system functions. The system extends from the bones of the skull, face, and mouth (collectively known as the cranium) down to the tailbone area (sacrum). Problems or imbalance in this system can result in sensory, motor, and neurological disabilities.



Ocean/Corbis

Deep tissue massage is used to release the chronic patterns of tension in the body through deep muscle compression by pressing deliberately along the grain of the muscle.

Dwayne Newton/PhotoEdit

Myotherapy is designed to ease trigger points, intense knots of muscle tension that often cause pain. Trigger points are released or erased by pressure applied to the trigger points.

Simon Watson/The Image Bank/Getty Images

Craniosacral therapy is a gentle, hands-on method of evaluating and enhancing the function of the craniosacral system.

Just as the cardiovascular system has a pulse, the craniosacral system has a delicate rhythm generated by spinal fluid as it is pumped through the brain and spinal cord. A skilled therapist can check the quality, strength, and amplitude of this rhythm at specific locations on the body to pinpoint the source of problems and imbalances. Once the problem has been determined, using a touch usually no more substantial than the weight of a nickel, the practitioner can assist the natural movement of the fluid and related soft tissue to restore balance and allow the body to heal itself of many associated problems.

Craniosacral therapy helps reduce stress, as well as improve spinal cord and brain functions. It typically is used to treat conditions such as chronic fatigue, migraines and other headaches, chronic neck and back pain, sinusitis, central nervous system disorders, temporomandibular joint syndrome (TMJ), posttraumatic stress disorder, and orthopedic problems.

Sports massage is a select type of massage focusing on muscle systems specific to the performance of athletes to help them perform optimally without injuries. The athletes receive massages before, during, and after competition to drain away fatigue, relieve swelling, reduce muscle tension, and improve flexibility. Massage is often combined with icing and compression. Sports massage can enhance the body's recovery process after the performance and reduce the risk of injury during performance.

Chair massage, also known as on-site massage or corporate massage, is given while the person receiving the massage is fully clothed and seated in a specially designed chair. A massage chair usually slopes forward, allowing better access to the large muscles of the back. This type of massage typically lasts between 10 and 20 minutes. It often is available at airports, in health clubs, in malls, or when a massage therapist visits business offices.

Hot stone massage is typically used by health spas, where stones are heated and positioned on specific locations on the body. The stones are gently moved to other places on the body, and light pressure is applied directly to the stones.

Self-Massage

Many of us would like the idea of a daily massage, but going to a professional massage therapist is not always possible. Still, according to the ancient Indian tradition of Ayurveda, massage is as vital to our routine as washing our hair or brushing our teeth. Rather than relying on someone else, self-massage is a nurturing, stress-reducing addition to our daily ritual.

The practice of self-massage in Ayurveda is mentioned in written texts that are more than 3,000 years old. Beginning in infancy, parents massage babies to increase their suppleness and flexibility, improve digestion, soften the skin, soothe the nervous system, and enhance bonding. Later, children are taught self-massage, which they continue throughout their lives.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

Felicia Tomasko[13] offers these suggestions for a relaxing self-massage routine:

1. **Using Oils** According to Ayurveda, oil is the most effective medium for massage. It nourishes both the skin and the deeper tissues. Cooling oils such as coconut or sunflower oil are soothing in the summertime, and warming oils such as sesame oil increase circulation in the cold of winter. Neutral oils—shea butter, almond, sunflower, and jojoba—can be used year-round.
2. **Optimal Time of Day** Morning is the recommended time for massage, before bathing or showering. Warm water helps the oil penetrate the skin, cleansing the lymphatic system and relieving muscular tension. Morning massage stimulates the nervous system, softens stiff muscles, and can even substitute for a strong cup of coffee!
3. **How to Do Self-Massage** In Ayurveda, massage is administered from the head to the feet. You can either apply oil or massage with dry hands. Vigorously rub your fingertips on your scalp to stimulate pressure points, increase circulation, and calm the mind. Then use your fingers to massage around your face and forehead. Continue the treatment down the sides of your nose and along your jaw, cheeks, and ears. Face massage prevents sinus congestion and relieves stress and muscular tension. Working the earlobes and the area around the ears especially soothes the nervous system by stimulating pressure points.

Giorgio Rossi/Shutterstock.com

Sports massage is a type of massage focusing on muscles specific to the performance of athletes.

Moving down your neck, chest, abdomen, and back, use your whole hand, giving attention to stiff areas such as your shoulders, neck, or lower back. To relieve stress, press the points halfway between your neck and the edge of your shoulder (the center of the trapezius muscle). Massage under your arms and along the sides of your chest and ribs to encourage lymphatic drainage by stimulating the high concentration of lymph nodes there.

Vigorous massage around the hips and low back relieves tension that collects from too much sitting. Circular motions around the abdomen encourage healthy digestion and elimination of wastes. When massaging your arms and legs, use long strokes on the large bones to increase circulation, release muscular tension, and move *prana* or chi (life force), but use circular motions around the joints to increase flexibility and stimulate the release of synovial fluid, the joint's lubrication.

An Ayurvedic ritual for a foot massage is to massage the feet with oil before going to sleep. This practice can calm the entire body by stimulating pressure points on the soles of the feet.

Just a few minutes of massage can encourage relaxation and well-being.[14]

As you have learned—and hopefully experienced—massage has therapeutic effects for many stress-related conditions and often is accompanied by pleasurable feelings of relaxation and well-being. Massage promotes relaxation through increased blood flow and the release of neurochemicals, such as endorphins, that are the body's "natural opiates." The physical and neurochemical effects of massage interrupt patterns of stress held in the body. Massage induces a state of deep rest which can leave the recipient feeling more balanced, relaxed, and energized.[14]

23.6 Conclusion

All 5 categories of CAM therapies relate to stress management. As research continues, and as the public increasingly uses these techniques, CAM therapies will have an expanded role in stress management and health promotion.

Many therapies such as massage, herbal supplements, and meditation have been with us for a thousand years or more. What's new is the growing recognition that these

wavebreakmedia/Shutterstock.com

Chair massage is administered while the person receiving the massage is fully clothed and seated in a specially designed chair.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

practices may hold exceptional value in meeting our health needs. Thanks to growing research during the past 2 decades, we are now better able to understand the role these alternative therapies can play in helping treat and prevent disease[15] and in promoting healthy, balanced life.

Groucho Marx once said, "Be open-minded, but not so open-minded that your brains fall out." The effectiveness of some alternative approaches to health and healing has not been confirmed through rigorous scientific study. This doesn't prove that the techniques aren't effective. It often means that we simply have no scientifically acceptable way to measure the effects. Research suggests that many forms of CAM are highly effective, especially for preventing stress-related conditions and promoting balance and well-being.

The bottom line is that you must take responsibility to investigate what is acceptable, safe, and effective for you. Experiment with the therapies that seem interesting and workable, and discover options for stress management and health that seem new and unusual. For generations, people around the world have found that they work.

ACTIVITY

23.1 Contrasting Health Systems

Purpose Contrast the traditional Western medicine approach to stress management to the naturopathic medicine approach.

Directions You know that stress is an epidemic and a contributor to many of the diseases and health problems that plague our society. A consistent theme throughout this book is that much of the stress we experience can be prevented and managed. Promoting health and preventing disease is an integral aspect of many of the complementary and alternative strategies presented in this chapter. For this assignment, you will need to do some research using references, in addition to your textbook.

Respond to the following statements:

1. Explain how stress management and prevention is typically approached in the traditional Western medicine health system.
2. Based on the 6 basic principles of naturopathic medicine found in this chapter, explain how stress management and prevention would be approached in naturopathic medicine.
3. Discuss your perception of the strengths and weaknesses of how stress would be addressed from both Western medicine and naturopathic medicine perspectives.
4. Cite your sources.

Key Points

- An estimated 60 to 90% of visits to healthcare professionals are for stress-related disorders, yet many people have found that the current U.S. healthcare system is not especially useful in dealing with stress.
- Integrative medicine combines mainstream medical therapies and CAM therapies.
- Many complementary and alternative therapies are effective in stress management.
- The National Center for Complementary and Alternative Medicine (NCCAM) has identified 5 categories of CAM medicine: alternative medical systems, mind/body interventions, biologically based therapies, energy therapies, and body-based methods.
- Alternative medical systems such as traditional Chinese medicine, Ayurveda, and naturopathic medicine focus on the holistic promotion of health.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

- Biofeedback is a mind/body intervention that facilitates conscious control of autonomic body functions.
- Biologically based therapies, such as herbal remedies, are well-accepted in many countries. Herbals are a popular choice for relaxation and sleep.
- Energy therapies such as reflexology, acupuncture, acupressure, emotional freedom technique, shiatsu, qi gong, tai chi, therapeutic touch, and reiki restore the flow of chi and support the body's natural healing.
- Massage is especially useful for relaxation because it reduces muscle tension, fatigue, and pain.

Key Terms

complementary and alternative medicine
complementary medicine
alternative medicine
integrative medicine
biofield therapies
bioelectromagnetic-based therapies
traditional Chinese medicine
Ayurveda
naturopathy
biofeedback
meridians
reflexology
acupuncture
acupressure
emotional freedom technique (EFT)
shiatsu
qi gong
tai chi
therapeutic touch
reiki
Swedish massage
deep tissue massage
myotherapy
craniosacral therapy
sports massage
chair massage
hot stone massage

References

1. *Health Promotion in Nursing Practice* (5th ed.), by N. Pender, C. Murdaugh, & M. Parsons (Upper Saddle River, NJ: Pearson Education, Inc., 2005).
2. "Complementary, Alternative, or Integrative Health: What's In a Name?" National Institutes of Health: National Center for Complementary and Alternative Medicine, retrieved March 30, 2014, from http://nccam.nih.gov/health/whatiscam.
3. "National Health Interview Survey," Centers for Disease Control and Prevention, retrieved March 30, 2014, from http://www.cdc.gov/nchs/nhis.htm.
4. "Expanding Horizons of Healthcare," National Center for Complementary and Alternative Medicine, retrieved May 9, 2011, from http://nccam.nih.gov.
5. *The Best Alternative Medicine: What Works? What Does Not?,* by K. Pelletier (New York: Simon & Schuster, 2000).
6. "The 6 Principles,"The Association of Accedited Naturopathic Medical Colleges, retrieved December 9, 2019, from https://aanmc.org/6-principles/.
7. "Biofeedback in Medicine: Who, When, Why and How?," by D. L. Frank, L. Khorshi, J. F. Kiffer, C. S. Moravec, M. G. McKee, *Mental Health in Family Medicine, 7*(2) (2010): 85–91.
8. "Valerian for Sleep: A Systematic Review and Meta-Analysis," by S. Brent, A. Padula, D. Moore, M. Patterson, & W. Mehling, *The American Journal of Medicine, 119*(12) (2006): 1005–1012.
9. "Acupuncture for Treating Anxiety and Depression in Women: A Clinical Systematic Review," by D. P. Sniezek, & I. J. Siddiqui, *Medical Acupuncture 25*(3) (2013): 164–172.
10. "Massage Reduces Anxiety in Child and Adolescent Psychiatric Patients," by T. Field, C. Morrow, C. Valdeon, S. Larson, C. Kuhn, & S. Schanberg, *Journal of the American Academy of Child Adolescent Psychiatry, 31*(1) (1992): 125–131.
11. "Infant Massage: The Practice and Evidence-Base to Support It," by A. Cooke, *British Journal of Midwifery, 23*(3) (2015).
12. "Tactile/Kinesthetic Stimulation Effects on Preterm Neonates," by T. Field, S. Schanberg, F. Scafidi, C. Bauer, N. Vega-Lahr, R. Garcia, J. Nystrom, & C. Kuhn, *Pediatrics* 77(5) (1986): 654–659.
13. "Self-Massage from the Ancient Tradition of Ayurveda" by F. Tomasko, retrieved May 9, 2011, from http://www.healinglifestyles.com.
14. *Holistic Health and Healing,* by M. Bright (Philadelphia: F. A. Davis Company, 2002).
15. *Mayo Clinic Book of Alternative Medicine* (2nd ed.), by B. Bauer (New York: Time Inc., 2010).

chapter

24

What Else Can I Do?

Why do I feel so good after watching a funny movie or TV show?

What kind of music is best for relaxation?

I feel better after a good cry. Besides crying, are there other ways to relieve upset feelings?

I've thought about journaling when I am stressed. Will that help me with my stress?

Anton Gvozdikov/Shutterstock.com

Rule number one: Don't sweat the small stuff.
Rule number two: It is all small stuff.

—*Robert Elliott*

Learning Objectives

Study of this chapter will enable you to do the following:

24.1 Describe the impact of laughter on stress and health.

24.2 Describe the positive effects of music.

24.3 List the most useful types of music for stress management.

24.4 Become aware of additional ways to reduce stress.

24.5 Avoid ineffective options for reducing stress.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

Real People, Real Stories

Alena's Story I got married when I was 18. My husband was 20. We made plans like so many newly married couples do . . . careers, buying a house, starting a family. Two short years into our marriage, our dreams were shattered. I was 3 months pregnant when we learned that my husband had brain cancer. His prognosis was poor, and I was told that he probably wouldn't live to see our baby born.

My husband didn't accept this death sentence. He told me that he was going to live—not only long enough to see the birth but long enough so his child would get to know him and remember him. Thus, our battle began. This was more than a battle with cancer. It was with the medical professionals who told us that he had only 6 months to live.

I started reading books to him in his hospital bed, often not knowing if he could even hear me. I found compilations of funny stories and jokes. I laughed—most of the time so that I wouldn't cry. Then came the day when he laughed with me. He became alert, oriented, and ready to take on each day with a smile. He became the talk of the hospital unit. The staff members were amazed at his progress and commented that he always had a smile on his face. He was always good for a joke.

Our daughter was born in March. My husband was by my side. He was there on her first day of preschool, kindergarten, first grade, and second grade.

Four years have gone by since my husband passed away. Not until he died could I fully see his strength and lust for life. The stress I felt in knowing that I was going to lose my husband surely must have been outmatched by the stress he felt, knowing that he was the one who was going to die. He never showed it—which is what helped me cope throughout his illness. His strength and sense of humor carried us both. I thank him for that. I thank him for not giving up and for having the courage to laugh at his 6-month prognosis. I thank him for showing me that life is not just black and white. I thank him for helping me put things into perspective. I thank him for teaching me that laughter is good medicine. I thank him for laughing his way into our daughter's life.

If you ask our daughter, she will say, "My daddy was a funny man."

24.1 More Stress-Reduction Strategies

Chapters 16 through 23 presented methods that work to turn off the stress response—to increase parasympathetic nervous system activity and decrease sympathetic nervous system activity. Those techniques were designed to bring about relaxation and restore balance. This chapter looks at several more ways to reduce stress, though they may not initially be designed to serve that purpose. They are things we typically include in our lives that, by their nature, can make us feel better. First, we will discuss humor and laughter. Then we will explore music as an essential strategy for relieving stress. The chapter will conclude with a list of other methods that people use to help them feel better, as well as a brief look at those things we should avoid in trying to reduce stress.

Although some of these stress-reduction methods have not been as thoroughly examined scientifically, strong anecdotal evidence supports their usefulness. The best attitude for the approaches described in this chapter is that of discovery. Experiment with the strategies and see which ones work for you. If you are like most people,

LAUGHT
R YOG

Ami Vitale/Getty Images News/Getty Images

In India, the "lion laugh" is a great stress reliever. Try it!

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

you will find positive results as you incorporate many of them into your lifestyle and daily activities.

Monkey Business Images/Shutterstock.com

The joyful laughter of babies reminds us that laughter is instinctive.

24.2 Laughter and Humor

Life can be serious at times, but we can do much to bring balance to our lives through laughter and humor. An Apache myth tells how the Creator endowed human beings with the ability to do everything—talk, run, see, and hear. But he was not satisfied until they could do just one thing more: laugh. And so, men and women laughed and laughed and laughed! Then the Creator said, "Now you are fit to live."[1]

Healthy children laugh as many as 400 times a day; adults only laugh about 15 times a day.[2] Maybe we learn to repress our emotions, or maybe our lives become so filled with responsibility and stress that we simply don't feel like laughing. Whatever the reason, the saying that "laughter is good medicine" has proven to be true. Laughter can help prevent stress, and it has positive health benefits.

Even though the terms **humor** and **laughter** may seem interchangeable, they are different in a few ways. You don't need a sense of humor to laugh. Adults can laugh without it, as do infants and children. If you have ever watched a 6-month-old baby burst into laughter spontaneously at Dad's funny faces, you recognize that laughter is innate. However, a sense of humor is learned. A sense of humor is a mental process, while laughter is a psychophysiological response that spontaneously engages every system in the body.[3] People with a terrific sense of humor may or may not laugh, and people may laugh without a sense of humor. The bottom line is that both laughter and humor are beneficial to prevent and reduce stress.

> A cheerful heart is good medicine, but a downcast spirit dries up the bones.
>
> —*Proverbs*

A darker side of humor is **sarcasm.** In contrast to humor, which has the power to heal and uplift, sarcasm can be a form of aggression used to put people down. Saying "I was just kidding" is often the back door out of a put-down. Sarcasm is not a socially healthy form of humor.

Benefits of Laughter

Laughter has shown physiological, psychological, social, spiritual, and quality-of-life benefits. The late Dr. Norman Cousins originally brought attention to laughter as a legitimate tool for relieving stress and pain. He found that 10 minutes of laughter allowed him 2 hours of pain-free sleep while dealing with a painful, chronic illness called ankylosing spondylitis. After his personal experience, he spent the rest of his life investigating positive emotions and their relationship to health.

Physiological Benefits of Laughter Humor and laughter have many effects involving the muscular, cardiovascular, respiratory, endocrine, immune, and central nervous systems. A review of research[4] reports that laughter:

1. Exercises and relaxes muscles.
2. Improves respiration.
3. Stimulates circulation.
4. Decreases stress hormones.
5. Increases the immune system's defenses.
6. Elevates pain threshold and tolerance.
7. Enhances mental functioning.

> The arrival of a good clown exercises a more beneficial influence upon the health of a town than 20 asses laden with drugs.
>
> —*Thomas Sydenham, M.D., 17th-century physician*

Psychological Benefits of Laughter Research also shows that laughter:

1. Reduces stress, anxiety, and tension, and counteracts symptoms of depression.
2. Elevates mood, self-esteem, hope, energy, and vigor.
3. Enhances memory, creative thinking, and problem-solving.
4. Improves interpersonal interactions.
5. Promotes psychological well-being.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

Laughter has been shown consistently to enhance mood, reduce stress, and improve health.

How Laughter Works

Laughter creates predictable physiological changes in the body, similar to exercise. Laughter exercises the diaphragm and the cardiovascular system; it has even been referred to as "internal jogging." The body responds to laughter like it does to exercise, in 2 stages:[5]

1. The *arousal phase*, with an increase in physiological measures, including pulse, respiration, and blood pressure.
2. The *resolution phase*, during which physiological measures return to resting or lower values, generating a relaxation response.

Laughter is associated with a release of tension and an increase in the natural mood-lifters known as **endorphins**—mood-elevating, pain-relieving chemicals produced naturally by the brain. Although laughter invokes a form of stress, it is different in effect from the stress that brings an increase in stress hormones and a compromised immune system. Laughter seems to create positive stress known as *eustress*.

Humor can empower people by giving them a unique perspective on life's problems. When individuals learn to see the humor in stressful situations, their response to the perceived threat often changes.[6] Alena's story in the opening vignette illustrates this idea. Her husband decided to take control of what he could during a situation in which much was out of his control. Humor and laughter had a positive impact on his health and on the well-being of those around him.

STRESS STUDIES

Laugh and Learn

College science courses have a reputation for being difficult and tedious. Researchers at Arizona State University wanted to see if science students appreciate instructors who include humor in their lectures. It was unanimous: 99% of science students like a professor who is a little bit humorous over one who isn't.

A total of 1,637 students from 25 college science courses at ASU reported that a teacher's jokes change the classroom atmosphere, improve student experiences during class, and enhance the student-instructor relationship.

The researchers found that humor tends to increase student attention to course content, instructor relatability, and student sense of belonging. The students also said that humor helps lighten the mood of science classes, decreases stress levels, and improves their perceived ability to remember science content. Conversely, offensive humor tends to decrease instructor relatability and students' sense of belonging.

Finally, male students were more likely to enjoy hypothetical jokes about gender, religious identity, sexual orientation, and race, but female students were more likely to find these topics offensive. Both genders agreed on three topics that were fair game for jokes: science, the college experience, and television.

Sources: *"To Be Funny or Not To Be Funny: Gender Differences in Student Perceptions of Instructor Humor in College Science Courses," by K. M. Cooper, T. Hendrix, M. D. Stephens, et al., PLoS ONE, 13(8) (2018): e0201258.*

Subjective Nature of Humor

Laughter and humor vary widely between genders, ages, and cultures. For example, Easterners (i.e., Asia, Eastern Europe) are less likely to use humor as a coping strategy in comparison with Westerners (i.e., Western Europe, the Americas). Despite this difference, Westerners and Easterners have similar patterns in the relationship between their humor and psychological well-being.[7] Humor may affect men and women differently. Although humor may reduce stress-related physical symptoms in men and women alike, it reduces stress-linked anxiety more significantly in men.[8] Men might prefer humor as a more appropriate way of releasing painful emotions such as anxiety. Women are more likely to use self-disclosure—confiding in a friend, for example. Women might note that the next time a male friend or relative cracks a joke at a most inappropriate time, he might be dealing with his anxiety in a way typical of his gender.

Laughter/Humor Strategies for Stress Prevention

- Keep a "funnies file" with your favorite cartoons and jokes.
- Choose a comedy rather than a violent movie.
- Reduce your exposure to news.
- When something makes you laugh, share it with a friend, and multiply the mirth.
- Keep a "humor journal" in which you write things that make you laugh, such as funny things children say or humorous errors in the newspaper. By being more aware, you will notice funny things happening around you every day.
- Plan a weekly funny movie night with family or friends. Take turns picking the movie.
- Read your favorite cartoons every day, or check out comical videos on YouTube.
- Spend time with fun, light-hearted people who find joy in life.

What makes us laugh differs for each of us. It is essential to find ways to laugh every day. Find ways to spend time with people who add joy and laughter to your life. Laughter is not just fun; it is very good for our health.

I think I should have no other mortal wants, if I could always have plenty of music. It seems to infuse strength into my limbs and ideas into my brain. Life seems to go on without effort, when I am filled with music.

—*George Eliot*

24.3 Music

Music and Mood

Music creates the mood for many settings. Those who select music for different environments and events recognize that it sets the tone. Think about sporting events, parades, restaurants, shopping centers, television shows, advertisements, dances, and many other places—the music is usually precise and purposeful to create an atmosphere ideal for that setting.

When you shop at a major department store, you may not be aware of the music that is playing in the background, but it has been selected to encourage shoppers to spend more time enjoying their shopping experience. Happy shoppers stay longer and buy more. Music at an all-you-can-eat buffet will be different than that at an expensive, top-notch restaurant. In an all-you-can-eat restaurant, the music is usually loud and peppy, because the owner wants you to hurry up, eat, and leave. In an expensive restaurant, the music is soft and peaceful, encouraging you to stay and order more food.

Think about any scary movie you have seen. Consider the most frightening part of that movie and all the theatrical components that come together to create this terrifying scene. What would happen if you were to remove the music during the chilling sequence? Suddenly it becomes far less frightening because the dramatic music intensifies the anxious emotion.

History of Music

Music has been used throughout history to calm the body, mind, and spirit. The term **music therapy** is new, yet the practice of using music to heal can be traced back to ancient times. The healing power of music therapy is recorded in the Bible: "And whenever the evil spirit from God was upon Saul, David took the lyre and played it with his hand; so Saul was refreshed, and was well, and the evil spirit departed from him" (1 Samuel, 16:23).

People who were imprisoned in Auschwitz, a Nazi concentration camp during World War II, used music to help them cope with some of the most difficult situations imaginable. People were separated from family and friends and forced into slave labor. They watched as people around them were executed and knew their turn to die was coming. The people in these camps seemed to have little to live for, yet many remained strong and endured. Some turned to music as a source of strength.

Prisoners about to enter the gas chamber joined together in their final moments to sing with feeling and passion the Czechoslovakian national anthem, and then a Hebrew song, *Hatikvah*, as a way to give each other strength for what was ahead of them. Music was a way for them to find peace, even in death.[9]

The Effects of Music on the Body and Mind

Musicologist David Tame says this in his book, *The Secret Power of Music:*

> To the question, "Does music affect man's physical body?" modern research replies in the clear affirmative. There is scarcely a single function of the body that cannot be affected by musical tones. The roots of the auditory nerves are more widely distributed and have more extensive connections than those of any other nerves in the body. Investigation has shown that music affects digestion, internal secretions, circulation, nutrition, and respiration. Even the neural networks of the brain are sensitive to harmonic principles.[10]

According to Sari Harrar, health, medicine, and science writer, "Music has the power to soothe the savage, stressed out beast." After reviewing clinical studies and anecdotal evidence from music therapists, Harrar concludes that music helps to:[11]

- Manage pain
- Improve mood and mobility

- Reduce the need for pain relievers and sedatives during and after surgery
- Relieve anxiety
- Lower blood pressure
- Ease depression
- Enhance concentration and creativity

Further studies show that music has measurable physical effects on the body. Certain kinds of music have been found to lower heart rates, respiratory rates, and blood pressure.[12] For individuals with hypertension and related conditions, music can be combined with other therapies to promote health. Here are findings from other studies:

- Patients with fibromyalgia who were exposed to self-selected relaxing music reported significantly lower pain intensity in comparison to a control group.[13]
- Subjects with osteoarthritis reported less arthritic pain when music was played, compared to a control group who simply sat quietly.[14]
- People undergoing surgery require less anesthesia, wake from anesthesia more quickly and with fewer side effects, and heal more rapidly when healing music is played before, during, and after the surgical procedure.[15]
- Individuals suffering from depression need less medication and have more success in psychotherapy when music is added to their course of treatment.[16]
- Grief, loneliness, and anger are all managed better when music is added to therapy.[17]
- Children with autism and children diagnosed with brain damage react positively to music therapy.[18]

Musician and songwriter Ronald Kotulak wrote in the *Chicago Tribune:*

> Almost everybody enjoys a beautiful melody. It takes root into the brain, priming the imagination, arousing passions, sedating anxieties and inspiring the body to move in rhythm. A person who is born deaf and never has heard a note can still learn to dance by feeling the vibrations music makes.[19]

Whether easing pain, relieving loneliness, or calming the cries of a screaming baby, music affects us profoundly.

How Music Works

Music affects the body and mind in 2 distinct ways:

1. Directly, as the effect of sound upon the cells, tissues, and organs
2. Indirectly, by affecting the emotions, which in turn influence many bodily processes

Let's look at examples of the 2 ways music can affect the body.

mimagephotography/Shutterstock.com

Music has the power to touch us deeply and can help tune out the stresses of daily life.

STRESS STORIES

Tibetan Singing Bowl Drops Heart Rate

If you've never heard the beautiful sound of a Tibetan singing bowl, you should take the time to go online and listen to one. A student once brought 1 into class and started "playing" it. The class watched and listened intently to a sound most of them had never heard before. The next day, another student from the same class came to me excited to tell me what happened to her while she was listening to the bowl. She was wearing a watch that captures her heart rate throughout the day. She showed me how, as soon as the bowl was sounded, her heart rate dramatically dropped from 75 to 50 beats per minute. I asked her how she felt as the bowl was making its sound. She said it was incredibly relaxing. Apparently, her heart thought so, too.

—MO

Perception of Music If you have ever been brought to tears by a song, you know that music affects us at an emotional level. The specific meanings we attach to music influence our reactions to it. This subjective emotional response to music activates a physiological response. Different types of music affect us differently.

Individual perception and preference may be the most critical factors in determining which music provides you with optimal benefits. To ease stress, you must enjoy the music you are listening to.

FYI

Healing Music

Researchers at Mayo Clinic wanted to see if playing music in hospital rooms–specifically, music mixed with sounds of nature–can reduce side effects and speed recovery after cardiovascular surgery. The music, known as "ambiance" therapy, was produced by Chip Davis and his group Mannheim Steamroller. Results suggest ambiance therapy can reduce pain and anxiety by helping patients to relax.

Source: Mayo Clinic Book of Alternative Medicine *(2nd ed.), by B. Bauer (New York: Time Inc., 2010).*

Which Music Is Best for Stress Management?

What types of music are best for reducing stress or for helping to create a relaxing environment? As we have discussed, individual choice and preference are vital factors. However, 2 genres of music—classical and New Age—are relaxing for many.

Classical Music **Classical music** is among the best types of music for relaxation and meditation. Music from the baroque period seems to be the most effective in reducing the stress response.[20] Composers representative of the Baroque period include Bach, Handel, and Vivaldi, among others.

Researchers who studied the effects of classical music found that when people are connected to an electroencephalogram (EEG) machine that records brainwave activity while listening to classical music, their brainwave patterns were similar to those commonly found in meditators. The researchers looked specifically at the **adagio movements** of the baroque and early classical compositions, with a tempo of about 60 beats per minute. These movements seemed to be the most relaxing and produced heightened alpha brainwave activity similar to deep relaxation, hypnosis, and meditation. The music of Mozart has become so popular as a healing tool that the treatment now is known as the **Mozart effect.**

A well-known example of an adagio composition of baroque music is Pachelbel's *Canon in D*. Whether it is Pachelbel's *Canon*, Mozart's classical pieces, or any of the other varieties of classical music, this genre of music lends itself well to relaxation.

Don Campbell, teacher and researcher in the fields of music, sound, health, and learning, believes that to get in touch with music that allows access to the unconscious and inner depths, one must listen to the masterpieces of baroque, classical, romantic, and impressionist composers. In his opinion, these composers have encoded many of their works with messages of divine inspiration and unity. He believes that great compositions offer keys to personal transformation and the understanding of wholeness to those who listen.[21]

New Age Music Another genre that has become well-accepted and effective for relaxation is **New Age music.** Subclassifications of New Age music include New Instrumental, Space Music, Music for Meditation, and Acoustic Guitar, among others. One of the earliest New Age music composers, Steven Halpern, described New Age music as music that does not build mainly on the principle of tension and release (like most music in general) but, instead, functions like wallpaper (meaning that it rests quietly and almost unnoticed in the background), which can create a positive, even healing atmosphere. New Age music is available to suit every type of relaxing activity, from yoga and deep meditation to increasing energy after a draining day.

One development in the use of music therapy is **medical resonance therapy music (MRT-music)**. This music, composed by German musicologist Peter Huebner, which feels like a combination of classical and new age music, is based on the principle of

STRESS STUDIES

Soothing Music Affects Stress Hormones

There is plenty of evidence that listening to recorded music, if it's a pleasant and soothing genre, can reduce stress. But what happens to stress levels when the performance is a public, live event?

In a recent study, investigators used 117 volunteers from concert performances showcasing the music of composer Eric Whitacre. The volunteers were a representative sample: some were avid concert-goers, attending more than 100 concerts per year, others were visiting a concert for the first time in more than six months. Some of the participants were musicians with decades of experience, and others were not musical at all.

For two separate concerts (of the same music and duration), the researchers took saliva samples from the participants before the performance and then 60 minutes later, during the interval. Across the board, the team found a drop in stress hormones and an increase in DHEA, showing an increase in relaxation.

Interestingly, the results were significant regardless of the age of the participants, their experience at concerts, or their overall musical ability. The authors note that this suggests "a universal response to concert attendance among audience members."

Source: *"Live Music Shown to Reduce Stress Hormones," by T. Newman, Medical News Today, April 12, 2016.*

resonance. **Resonance** means that the precise harmony contained in a given musical structure resonates inside the human body, from the ears to the brain and from the brain to various organs. In this way, it also becomes an essential tool for preventing disease.[22]

The effects of MRT-music have been studied for years in people with many conditions, including surgery patients; individuals with cancer, skin diseases, and high-risk pregnancies; and individuals in crises.[23] One study investigated the effect of MRT-music on women with high-risk pregnancies. In 5 years, 140 women with high-risk pregnancy were individually studied at stages throughout their pregnancy. The women listened to MRT-music for 8 sessions that lasted about 40 to 60 minutes each.

These researchers found that with continued use of MRT-music, the anxiety levels of each woman decreased. The women also had an increased threshold of pain sensitivity in labor, meaning they were able to handle higher levels of pain and had a reduced labor time. The heart activity of the developing fetus increased, showing a strongly developing heart. The number of interrupted pregnancies was reduced by about half, and no harmful side effects were seen in the study.[24] The underlying principle of MRT-music is that music can influence our body directly at the cellular, tissue, and organ levels.

In summary, specific genres of music can affect us directly at a cellular level. Classical and New Age music seem to be especially useful in calming the mind and relaxing the body. Still, individual perception and preference may be the essential factors in determining what music works best for you. In any case, music affects us profoundly. In the words of Nietzsche, “Without music, life would be a mistake.” Music that is appealing and relaxing can be an essential part of any personal stress-management program.

24.4 What Else Can I Do?

This chapter introduced you to 2 effective ways of affecting stress levels: laughter and music. You can do a variety of other “little things” to help reduce stress each day. They may not be specifically designed to turn off the stress response, but people notice that when they do these things, their anxiety levels decrease, they feel more at peace, and they are in more control of their emotions and their life. Here are some of these ways.

- *Listen to your body.* When you have chronic stress, your body sends signals saying that it is on overload. Typical signs of overload, discussed in earlier chapters, include fatigue, headache, muscle pain, irritability, and inability to concentrate. Tune in to these signals and become familiar with those that occur most often. If you notice a headache coming on each time you feel overwhelmed, this is a signal that your stress response is up and running in high gear. Pay attention to the other messages that your body sends during tense times. At the onset of these symptoms, do something at once to reduce the stress you feel so you can deal with the situation appropriately.
- *Deal directly with the cause.* See if you can do something to eliminate or modify stressors. If stress comes from your relationship with a person, take the time to iron out your differences. If tension comes from an unfinished task, restructure your priorities so you can fulfill that responsibility. Examine your routines at home, at work, and at school, and drop unnecessary activities.
- *Distance yourself.* Parents sometimes use a “time-out” for misbehaving kids. Most adults also can benefit from occasional time-outs. A time-out can be a useful tool to help someone step out of a stressful situation, cool down, and refocus on what is essential. When you find yourself in an emotionally charged situation, step back and ask yourself, “Is this working?” If not, take a few moments to separate yourself from the situation. Remove yourself from the battle zone and let your emotions subside. From an emotional distance, you can sometimes see the situation more clearly.
- *Talk yourself through a situation.* We readily feel anxious and worried when we are surrounded by negative feedback, especially from ourselves. Instead of saying, “I’ll never get this done in time,” say, “I’ve been in similar situations before and managed it all right!” Be your own cheerleader; give yourself pep talks instead of self-scolding.
- *Pat yourself on the back.* A little self-congratulation can go a long way toward feeling a lot of self-worth. Mentally pat yourself on the back when you do something successfully,

no matter how small. When you are successful at something, take a moment to allow yourself to feel good about a job well done. Curiously, we are quick to judge our actions negatively when we think we haven't measured up. Why not choose the opposite route when we have been successful?

- *Be creative.* When you are in a problematic situation, take a few minutes to write down every possible solution, regardless of how impossible or crazy it might seem. Writing your list of options reminds you that you do have the freedom to select your course of action, that you do have some control. This thought alone can reduce stress, and you will come up with a brilliant solution to the problem.
- *Change problems to challenges.* Anytime you catch yourself thinking or saying that something is a problem, change how you think about and speak of it by calling it a challenge. We view challenges differently than problems. Problems are viewed as annoying and difficult and often involve discomfort. Challenges, on the other hand, are usually seen as opportunities. They allow you to rise to the occasion and grow as you meet the challenge head-on.
- *Keep agreements.* An agreement is a verbal or nonverbal commitment that we intend to complete a specific action. If we say we will do something, and then we do it, we have kept an agreement. When we keep agreements, we keep our integrity. When we don't keep agreements, integrity is lost. Lying, cheating, and stealing are examples of not keeping agreements.

  We make agreements every day. We even make agreements with ourselves. For example, we say to ourselves that we will get up at a particular time, clean the house, forgive someone, or not drink any more caffeinated beverages. Keeping agreements is a significant demonstration that you are choosing to be responsible for your life and the outcomes you create.
- *Take short naps.* Naps are short periods of rest that recharge the body for the rest of the day. Shorter naps of 10 to 20 minutes are the most beneficial length.[25]

  When people nap too long, they feel a decline in alertness and performance. Researchers believe this is so because when a person sleeps for more extended periods during the day, the mind begins to do the same thing it usually would do at night: Brainwave activity goes into deeper sleeping patterns, just as it would during a typical night's sleep. Upon awakening, the sleeping rhythms are still in a deeper nighttime sleeping mode. As a result, the person takes longer to return to the normal levels of activity compared to the immediate improvement following shorter naps. Other research on napping suggests that a quick afternoon nap does not seem to hinder the ability to enjoy a good night's sleep.[26]
- *Change your physiology; change your feelings.* We can change how we feel by changing how we position our bodies. An energized, happy person holds herself in a certain way. Her face looks a certain way—comfortable and confident. She holds her body in a certain way—upright and secure. Her shoulders are up and back, her chest is held high, and she's breathing a certain way—fully and deeply.

  On the other hand, a depressed person positions herself in a very different way. She may move more slowly, her shoulders may sag, and her voice may become shallow and faint. You can trick your emotions into feeling better by putting your body into the position that it usually feels when you are happy, energized, and alive. Curiously, emotions can follow the body's physiology.

  Try this: Begin by smiling. Next, push your shoulders back and sit up or stand up straight. Take a full, deep breath to fill your lungs with air completely. Raise your head and look up. Raise your eyebrows and clap your hands several times above your head. As you do this—as unusual as it sounds—you will notice yourself immediately feeling better. A smart way to change your physiology and thereby change how you feel is by exercising. Doing something active requires more oxygen, which requires deep breathing, alertness, and a positive, energetic body posture.
- *Write about it.* Keeping a diary or **journaling** is a proven way to release emotions. Researchers found psychological improvement from emotional problems

among subjects after they wrote about their stress.[27] Keeping a "stress diary" can help you identify stressors in your life. Once you find them, you can manage these stressors more easily.

Giving yourself a few minutes to put your thoughts into words may be useful in helping you deal with the problem at hand. Many people find stress relief through the simple act of writing down images and thoughts that race around in the mind. Once you move those thoughts from your mind to paper, you may want to throw them away, or you may choose to reflect on the ideas. The stress-relieving value often comes from the simple act of getting the thoughts out of your head and down on paper, where you can see them.

There is no evidence that typing your thoughts, rather than writing them on paper, is better or worse than writing them, for stress relief. If typing or using your phone to record your thoughts seems better for you, fortunately, there are programs like Google Docs, Microsoft Word, OneNote, or Day One to help you do this.

You can practice journaling in a variety of ways: You can unload all of your thoughts and feelings about something, or you might write a single note or 2 about an event that you can deal with later at a more appropriate time. Some people like to get their thoughts on paper immediately after something painful has happened. Some prefer to wait until they have some quiet time before going to sleep. Others do their journaling in the morning after a refreshing night's sleep because "sleeping on it" helps them gain perspective on the situation and brings to the surface innovative ideas or solutions previously unseen. Sometimes, if a person doesn't write down ideas immediately, they slip back into the subconscious mind waiting for another ideal time to resurface.

Mindful writing—writing whatever happens to be on the mind right now—is a powerful way to allow the insights and inspiration from one's intuition to bubble to the surface.

Brenda Ueland, the author of the classic book on mindful writing *If You Want to Write,* said:

> Writing, the creative effort, the use of the imagination, should come first—at least some part of every day of your life. It is a wonderful blessing if you will use it. You will become happier, more enlightened, alive, impassioned, light-hearted and generous to everybody else.[28]

It's the Little Things That Add Up

Each stressor that we experience can work together with the others to produce a massive mountain of stress. Viewed on the positive side, immersing ourselves in many small, positive things can also add up to a significant contribution toward a more relaxing lifestyle. Here are some examples of little things that add up to a more satisfying life:

- Simplify mealtimes.
- Play with children at a playground and do all the fun things they do.
- Say something nice to somebody.
- Fly a kite.
- Walk in the rain.
- Go dancing and let loose for a while.
- Say hello to a stranger.
- Read an enjoyable book while you're curled up in a warm bed.
- Go to a museum or a somewhere art is exhibited.
- Hum or whistle your favorite tunes.
- Feed the birds.
- Work in the garden.
- Make a paper airplane and throw it from a high place.
- Learn a new song.
- Go on a picnic.
- Watch your favorite movie.
- Make and eat popcorn.
- Write a letter to an old friend.
- Cook a meal and eat it by candlelight.

You could add many simple yet relaxing things to this list of "little things."

She explains how you can bring your best ideas to the surface.

> You sit down to write, to think . . . No logical thought comes in the first minute or two that you try it. A sort of paralysis follows, a conviction of your mental limitations, and you disconsolately go downstairs to do something menial and easy like washing the dishes, while doing so (though not knowing it) having some wonderful, fascinating, extraordinary, original, illuminating thought. Not knowing that they are thoughts at all, or "thinking," you have no respect for them and do not put them down on paper—which you are to do from now on! That is, you are always to act and express what goes through you.[28]

Spend 10 to 15 minutes at a time, putting down your feelings on paper. Don't worry about grammar, sentence structure, or spelling. You are the only one who will read your

Ginny Filer/Shutterstock.com

Many people find relief by writing down the stressful thoughts that race around in their minds.

written work. Unload on paper the events of the day and, *more importantly,* how you feel about the events, especially the activities in which you found yourself getting upset, angry, or stressed.

Don't let journaling or diary writing become a stressor. You should write, as a method of emotional release, when you feel the urge. Don't force writing to happen, but when you do feel the urge to write, follow it.

- *Talk it out.* Don't bottle up anger, worries, or frustrations. Sometimes, discussing problems with a trusted friend can help clear your mind so you can concentrate on solving problems. Learning to talk things over with someone you trust can release the pressure, make you feel better, and help you come to a new understanding of the problem.
- *Cry it out.* We can find relief from stress by physically releasing painful emotions. Sometimes crying is the best way to do this. Some people believe that 1 reason that women tend to live longer than men in our society may be their willingness to release emotional distress by crying. As a result, they release potentially damaging stress. Many people report feeling relieved after releasing pent-up emotions by crying it out.
- *Scream it out.* Like crying, the act of releasing pent-up energy by loud verbal emissions or screaming is useful in releasing emotional energy for many people. Turn up the radio in your car and sing your favorite song at the top of your lungs, or put your face into your pillow and blast away.

  We should note that screaming directly at other people has the opposite effect and usually leads to further problems. When you use scream therapy, don't use it to attack another person; instead, release the energy you feel.
- *Sing it out.* As we explored earlier, music can be a powerful way to release tension and stress. Many people relax by playing their favorite instrument. Singing can be a relaxing way to relieve stress, too. People sing in the shower, while driving, or while doing chores. Many people add music to make work less stressful. Whatever songs you prefer, you can have a lot of fun enjoying yourself and releasing your stress by singing.
- *Dance it out.* The combined benefits of exercise and music can come together in a fun and relaxing way when we dance to relieve stress. In his book *Tuesdays with Morrie,*

STRESS STORIES

Furious at the Bad Umps

One summer, our softball team was picked as 1 of the best teams in a weekend tournament. We were seeded to play the first game against 1 of the worst teams. As the game moved through the innings, it was clear the umpires did not want us to win. Every call seemed to go in favor of the other team. Even calls that clearly should have been in our favor went the other way. I found myself getting extraordinarily angry. I believed that we lost that game because of the umpires.

To my dismay, we had the same umpire for our next game. Because of our yelling and complaining in the first game, these umps were not on our side from the first pitch. This game went ahead in much the same way as the first had done. Once again, every call went in favor of the other team. I found myself getting so angry that I thought I was going to explode. My plans for playing softball all weekend were crushed as we lost again and were finished for that tournament. I acted like a total idiot, throwing my baseball glove, throwing my bat at the fence, screaming at the umpires.

By the time I arrived home, I was still seething. This was an odd feeling for me because I get angry so infrequently. I got on my bike, said a quick goodbye to my wife, and rode to a nearby area where there were no homes except for farmhouses separated by large spaces. I found a stretch of road about a quarter of a mile long. Looking around and seeing no one, I began riding along this stretch and started screaming at the top of my lungs. I let the screams come out full blast. When I got to the end of this road, I noticed that nobody had seen me, and the cows didn't seem to mind. So, I turned around and did the same thing back up the same road. I did this 5 times. By the fifth time, I was laughing out loud. It wasn't forced or contrived. It was spontaneous laughter filled with joy. I had absolutely no negative energy remaining inside about the spoiled tournament. All the anger I had felt before was gone entirely—not a hint of negative energy toward those umpires of any kind. For me, scream therapy works.

—MO

Mitch Albom describes how his old professor, Morrie Schwartz, experienced the moment through dance:

SDI Productions/E+/Getty Images

Doing something *to* help others takes our mind off our problems—and it feels good too.

> He had always been a dancer, my old professor. The music didn't matter. Rock and roll, big band, the blues. He loved them all. He would close his eyes and with a blissful smile, begin to move to his own sense of rhythm. It wasn't always pretty. But then, he didn't worry about a partner. Morrie danced by himself.
>
> He used to go to this church in Harvard Square every Wednesday night for something called "Dance Free." They had flashing lights and booming speakers, and Morrie would wander in among the mostly student crowd wearing a white T-shirt and black sweatpants and a towel around his neck, and whatever music was playing, that's the music to which he danced. He'd do the lindy to Jimi Hendrix. He twisted and twirled, he waved his arms like a conductor on amphetamines, until sweat was dripping down the middle of his back. No one there knew he was a prominent doctor of sociology, with years of experience as a college professor and several well-respected books. They just thought he was some old nut.
>
> Once, he brought a tango tape and got them to play it over the speakers. Then he commandeered the floor, shooting back and forth like some hot Latin lover. When he finished, everyone applauded. He could have stayed in that moment forever.[29]

It is easy to imagine the fun and relaxation that Morrie must have experienced. Why not make exercise fun through dancing?

- *Focus on the needs of others.* Shifting our attention from our problems to the needs of someone else tends to help us forget about the rough times we experience. As people see the challenges others face, they often gain a new perspective on their own problems. They develop an attitude of gratitude instead of self-pity. They also feel fulfillment from helping others in need.
- *Have sex.* The sexual response involves a sequence of events that affect the body and mind. The physiological experience of the sexual response typically has a relaxing effect on both. During the orgasm phase of the sexual response, many muscles throughout the body tense. Following orgasm, those tensed muscles automatically relax. This leaves the body feeling deeply relaxed. Consensual sex can be a terrific way to relieve stress and tension.
- *Soak in the tub.* The warmth of the water relaxes your muscles. Being by yourself without anything else to do except enjoy the water is relaxing as well. As a pleasant way to unwind after a rough day, place lit aromatic candles around the bathtub. Soak in warm water while playing relaxing music, and let the peaceful environment and soothing warm water completely relax your body and mind.
- *Gaze at the sky.* Sit back and see the heavens. Enjoy the view. Pondering the vastness of the universe can make many problems seem insignificant. If it is daytime, watch the blue sky and the clouds. Realize that the sky is perfect in every way, yet it is always changing. Consider this as a good metaphor for your own life.
- *Embrace stress!* There's an old maxim that says, "What doesn't kill you makes you stronger." Regularly doing challenging things helps you become more resilient to stress. Here are some examples: get out of your comfort zone, try intermittent fasting, take a cold shower, or do a high-intensity interval training (HIIT) workout. As you do these, your body gets better at healing and better at doing other things that seem stressful. Get comfortable being uncomfortable!

24.5 "Solutions" to Avoid

In Chapter 15, we discussed some unhealthy lifestyle habits, such as drinking and drugs, that people sometimes use as a means of coping with stress. The following coping strategies are best avoided.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

Don't:

- *Gossip.* When people don't feel so good about themselves, they sometimes resort to talking about other people. The reasoning for this is if they can bring someone else down, it will psychologically elevate them, in some way, above the other person. By talking about someone else, they can have the feeling that they are in control, more aware, and that they have more value and worth. Unfortunately for them, this is not possible, as no one has any more value or worth than anyone else.

  Remember—we are what we think. Spreading negative thoughts creates and intensifies negative feelings and emotions. It may bring a short-term pleasurable sensation, but eventually, gossip creates adverse social and emotional problems as well as guilt. People who gossip often entertain mistaken paranoid thoughts that others are talking unfavorably about them as well.
- *Whine and complain.* Like gossiping, thinking and speaking in a complaining, "poor-me" way may seem like a solution, but it does nothing to solve problems and is a source of stress. Whining doesn't deal with the problem directly, but instead makes it seem more significant than it is by expanding it in the mind. Nobody enjoys being around someone who always tells everyone how terrible things are by vying for sympathy or pity.
- *Blame others.* A sure-fire way to release yourself from responsibility and convince yourself that you don't have to deal with a problem is to blame others. But this solution is short-lived. On the surface, this way of dealing with issues makes people feel more in control of the situation, but blaming someone else for the consequences of your actions merely shows an unwillingness to accept responsibility. If you don't take responsibility, you deny yourself the opportunity to problem-solve effectively. Blaming also damages relationships and leads to feelings of anger, frustration, and helplessness.
- *Self-inflict pain.* When a person is stressed, the fight-or-flight response is hard at work gearing up to avoid potential pain. Sometimes we already feel severe emotional pain because of emotional traumas such as abuse or neglect. Some people choose to try to deal with that emotional distress by creating physical pain to replace it. Typical examples of self-inflicted pain are deliberately cutting oneself, pinching, pulling out hair, or hitting oneself. Experiencing a physical pain to try to drown the emotional distress may result in temporary relief, but as a replacement method of managing stress, it is ineffective because it adds emotional stresses including guilt, shame, and embarrassment. If this is used as a method to cope with emotional distress, the best solution may be to get help from a counselor or a licensed therapist.
- *Overdo it.* Any activity that is healthy in moderation becomes unhealthy and leads to more stress when it is overdone. Eating, for example, is a healthy, positive part of practical living. But overeating can lead to an unhealthy existence with the added risk of disease and a compromised lifestyle. Sufficient and satisfactory sleep is a critical component in reducing stress levels, but oversleeping to avoid important activities or to waste time can be detrimental. Frequently, when people oversleep, they don't feel much better. The body and mind need only a certain amount of sleep for optimum functioning. More sleep than this can be counterproductive. Natural sleep patterns are interrupted, and a person may feel tired and sluggish throughout the day.

  No harm comes from a moderate amount of screen time as a diversion or distraction from the stressors of the day, but spending many hours looking at a screen can prevent people from doing important things in life. Even health-promoting activities like exercise, which would be stress-reducing, can be unhealthy if done in excess.

  As we have learned, our body and mind give us feedback that says we are overdoing it. If we don't feel well after we finish some pursuit; if we are not living according to our highest values; if we ignore essential things in life; or if we feel uneasy or apathetic, we should view these signals as feedback that we are overdoing something. We need to look again at how much time or energy we should spend on our activities.
- *Attempt suicide.* Some people struggle with stressful thoughts and feelings so profoundly that they start considering suicide as the only alternative to escape the intense stress. Overcoming suicidal thoughts is outside the scope of this book. But if you are considering

suicide, or you know of someone who is, get help. Even if you don't think anyone else could help you, every problem has an answer. Sometimes it requires the help of someone else to discover alternatives. Asking for help is not a sign of weakness. It is a sign of love—the love of yourself. Even if you don't feel worthy of love, you are! For help, or to talk with someone, call this number: 1-800-273-8255. The National Suicide Lifeline provides 24/7, free, and confidential support for anyone looking for guidance and support related to suicide.

There are many positive, healthy options for preventing and managing stress. Take control of your life, so you don't let these unhealthy options take control of you. You deserve better.

24.6 Stress Management for Life—Planning for the Future

Now that you have completed the final chapter in your book, take the opportunity to focus on synthesizing your learning, reflecting on your growth, and planning how to implement what you have learned for a lifetime of better stress management and improved quality of life. Your textbook is called *Stress Management for Life* with the intention that you can incorporate what you have learned for a lifetime of better stress management.

Throughout this book, you have learned many tools and techniques for stress management. Each of you will have your favorites. Some of you found that prevention techniques, like applying the POPP formula or Living above the Line (Levels of Responding table), work best. Others found significant meaning in prioritizing your values, keeping a gratitude journal, or committing Random Acts of Kindness. Few students miss the importance of understanding the power of how perceptions determine reality. Many students report that time management and money management chapters help them take control of and change their life. From the relaxation techniques, the favorites run the gamut from meditation to PMR to autogenics to guided imagery to yoga. The Power Nap and Restful Breathing are always popular choices.

Taking control of your life is perhaps the most crucial stress reduction strategy. You now have the knowledge, tools, skills, and abilities to take control of your life through the prevention and management of stress. The Stress Management Activity for this chapter will help you continue on the path to an improved quality of life. Enjoy the journey!

24.7 Conclusion

This chapter has presented many additional ways to reduce stress, including laughter, music, and many "little" things you can include in your daily routine. The methods you choose are up to you, but feel confident that you now have a toolbox full of stress-relieving tools. Your personality and the situations in which you find yourself will determine which tools will work most effectively for you. With practice, the tools become sharper and more proficient.

ACTIVITY

24.1 Synthesis

Purpose This activity provides you with an opportunity to synthesize and analyze what you have learned throughout the semester, and to plan for incorporating your knowledge into your life.

Review Start by taking some time to review your course activities during the semester. Review the assignments you have completed, the relaxation exercises you have practiced, your journals, and readings from your textbook. When you have completed this, write your response to the following questions:

1. What are the 3 most important things you have learned from this course, and why? Give this careful thought, and include your rationale for the relevance of this learning to your life.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

2. You practiced a variety of stress-reduction techniques throughout the semester. List the 2 that worked best for you and why you think each was effective. Are there specific reasons why you would use each? If so, explain.

Planning Complete the Stress Management for Life Contract found at the CengageBrain website in Chapter 24 of your Student Activities Manual. You do not need to submit your contract, but when you have completed it, answer the following:

1. List your 2 stress management goals. Be specific about what you will do, and write your goals in the SMART format (see Chapter 12 for a review on writing SMART goals).
2. Explain the specific things you will do to promote the accomplishment of your goals.
3. What payoffs will you realize by achieving your goals?

Sharing Select a person whom you trust and whose input you value; someone who will listen to you with an open mind and provide honest feedback. Share with that person the 3 most important things you learned this semester. Include what you have been working on in the course, including your significant stressors, why you think your quality of life could improve if you manage stress better, the techniques you have used to prevent and manage stress, and your plan for the future. Ask for his or her perspective on both your stressors and your plan. After you have talked with this person, write your response to the following questions:

1. Who did you talk to, and why?
2. What input, advice, and observations did this person offer? What, if any, of this person's feedback was useful to you?
3. What did you learn from this sharing?

Key Points

- Laughter is stress-relieving and has a positive impact on health.
- Music can have a powerful stress-reducing effect.
- Music affects both the mind and body by its direct effect on cells, tissues, and organs, and indirectly by affecting the emotions.
- Classical and New Age music are especially useful for relaxation.
- A variety of simple strategies help release pent-up emotional and physical tension.
- Some ineffective options for dealing with stress should be avoided and can be dangerous.

Key Terms

humor
laughter
sarcasm
endorphins
music therapy
classical music
adagio movements
Mozart effect
New Age music
medical resonance therapy music (MRT-music)
resonance
journaling
mindful writing

References

1. *Healing Beyond the Body: Medicine and the Infinite Reach of the Mind,* by L. Dossey (Boston: Shambhala, 2001).
2. *Mosby's Complementary and Alternative Medicine: A Research-Based Approach* (3rd ed.), by L. Freeman (St. Louis: Mosby, 2009).
3. *Fundamentals of Complementary and Alternative Medicine* (4th ed.), by M. Micozzi (St. Louis: Saunders Elsevier, 2011).
4. "The Therapeutic Value of Laughter in Medicine," by R. Mora-Ripoll, *Alternative Therapies in Health and Medicine, 16*(6) (2010): 56–64.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

5. “Humor, Laughter, and Play: Maintaining Balance in a Serious World,” by P. Wooten. In B. Dossey, C. Guzetta, & L. Keegan, (eds.), *Holistic Nursing: A Handbook for Practice* (3rd ed.) (Gaithersburg, MD: Aspen Publishing, 2000).
6. “Feasibility of a Humor Training to Promote Humor and Decrease Stress in a Subclinical Sample: A Single-Arm Pilot Study,” by N. Taglidou, V. Loderer, E. Distlberger, & A. R. Laireiter, *Frontiers in Psychology, 9* (2018): 577.
7. “Cultural Differences in Humor Perception, Usage, and Implications,” by T. Jiang, H. Li, & Y. Hou, *Frontiers in Psychology, 2019* (2019).
8. “Functions of Humor in the Conversations of Men and Women,” by J. Hay, *Journal of Pragmatics, 32*(6) (2000): 709–742.
9. “Transcending Circumstance: Seeking Holism at Auschwitz,” by L. H. Freeman, *Holistic Nursing Practice, 16*(5) (2002): 32.
10. “Music-Evoked Emotions—Current Studies,” by H. E. Schaefer, *Frontiers in Neuroscience, 11* (2017): 600.
11. “Got Pain? Got the Blues? Try the MUSIC CURE,” by S. Harrar, *Prevention, 51*(8) (1999): 100.
12. “Effects of Music on Systolic Blood Pressure, Diastolic Blood Pressure, and Heart Rate: A Meta-Analysis,” by R. S. Loomba, R. Arora, P. H. Shah, S. Chandrasekar, & J. Molnar, *Indian Heart Journal, 64*(3) (2012: 309–313.
13. “Music Reduces Pain and Increases Functional Mobility in Fibromyalgia,” by D. A. Garze-Villarreal, A. D. Wilson, L. Vase, et al., *Frontiers in Psychology, 5* (2014): 90.
14. “Music, an Effective Tool for Relief of Chronic Osteoarthritis Pain in Elders,” by R. McCaffrey & E. Freeman, *FOMAT Medical Research,* (2017).
15. “Effects of Music Therapy under General Anesthesia in Patients Undergoing Abdominal Surgery,” by M. Kahloul, S. Mhamdi, M. S. Nakhli, et al., *The Libyan Journal of Medicine*, *12*(1) (2017): 1260886.
16. “Using Music Techniques to Treat Adolescent Depression,” by C. Hendricks, B. Robinson, L. Bradley, & K. Davis, *Journal of Humanistic Counseling, Education and Development, 38*(1) (1999): 39.
17. “Music Therapy as Grief Therapy for Adults with Mental Illness and Complicated Grief: A Pilot Study,” by Y. A. Illya, *Journal of Death Studies, 39*(3) (2013): 173–184.
18. “Music Improves Social Communication and Auditory-Motor Connectivity in Children with Autism,” by M. Sharda, C. Tuerk, R. Chowdhury, et al., *Translational Psychiatry*, *8*(1) (2018): 231.
19. “Rhythm, Melody, Life,” by R. Kotulak, *Chicago Tribune* (September 23, 2003), retrieved on December 9, 2019, from https://www.chicagotribune.com/news/ct-xpm-2003-09-21-0309210072-story.html.
20. *Superlearning*, by S. Ostrander, L. Schroeder, & N. Ostrander (New York: Dell Books, 1994).
21. *Music and Miracles,* by D. Campbell (Wheaton, IL: Theosophical Publishing House, 1992).
22. How Does the Medical Resonance Therapy Music Function? Retrieved May 9, 2011, from http://www.resonancemusic.net.
23. “Effects of ME Therapy Music on Patients with Psoriasis and Neurodermatitis: A Pilot Study,” by I. Lazaroff & R. Shimshoni, *Integrative Physiological and Behavioral Science, 35*(3) (2000): 189–198.
24. “Clinical Application of Medical Resonance Therapy Music in High-Risk Pregnancies,” by V. N. Sidorenko, *Integrative Physiological and Behavioral Science, 35*(3) (2000): 199–208.
25. “Benefits of Napping in Healthy Adults: Impact of Nap Length, Time of Day, Age, and Experience with Napping,” by Catherine E. Milner & Kimberly A. Cote. *Journal of Sleep Research, 18*(2) (2009): 272–281.
26. “Effects of Napping on Sleepiness and Sleep-Related Performance Deficits in Night-Shift Workers: A Systematic Review,” by J. S. Ruggiero & N. S. Redeker, *Biological Research for Nursing, 16*(2) (2014): 134–142.
27. “Effects of Expressive Writing on Psychological and Physical Health: The Moderating Role of Emotional Expressivity,” by A. N. Niles, K. E. Halton, C. M. Mulvenna, et al., *Anxiety, Stress, and Coping 27*(1) (2014): 1–17.
28. *If You Want to Write,* by B. Ueland (St. Paul, MN: Graywolf Press, 1987).
29. *Tuesdays with Morrie,* by M. Albom (New York: Doubleday, 1997).

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

Glossary

A

ABCDE technique Cognitive method that involves examining irrational beliefs that make us anxious, changing those beliefs, and envisioning more positive consequences of our actions.

ABC123 Prioritized Planning Time management method designed to move from crisis management and putting out fires toward doing those things that are most important on a daily basis.

Abdominal breathing or diaphragmatic breathing Inhaling in a way that causes the **diaphragm** to contract and move down, drawing air into the lungs.

Active progressive muscle relaxation Dynamic form of progressive relaxation characterized by tightly tensing muscle groups and then relaxing them.

Acupressure Therapy in which finger pressure is applied to points on the body thought to be areas of chi concentration; described as **acupuncture** without the needles.

Acupuncture Therapy in which hair-thin, sterile needles are inserted into the body at specific points (acupoints) to manipulate the body's flow of energy and thereby create balance, relieve pain, or produce regional anesthesia.

Acute stress Stress that results from short-term **stressors**.

Adagio movements Baroque and early classical compositions with a tempo of about 60 beats per minute; suggested to aid in relaxation.

Adrenal cortex Outer portion of **adrenal glands**.

Adrenal glands Two triangle-shaped glands, one positioned on top of each kidney, from which stress hormones are secreted during the stress response.

Adrenal medulla Inner portion of **adrenal glands**, where **epinephrine** and **norepinephrine** are secreted.

Affirmation A statement written in the present tense as a positive "I" statement and applied to the clarifying paragraph that describes one's values.

Affluenza Disease-like epidemic causing people in society to seek more and more material possessions, resulting in growing debt.

Agape Unselfish love that gives of itself and expects nothing in return.

All-or-none principle Physiological characteristic of a contracting muscle that says a muscle fiber contracts completely or not at all.

Allostatic load The cumulative physiological wear and tear on the body that results from ongoing adaptive efforts to maintain homeostasis in response to stressors.

Alternating nostril breathing Also known as balanced breathing, a technique that uses gentle occlusion of a nostril through a full breath, then switches to the other nostril, and continues back and forth.

Alternative medicine Therapies that are used in place of conventional medicine.

Altruism Helping or giving to others without thought of self-benefit.

Anger A transient emotional response based on the way one chooses to think about events, usually triggered by perceived provocation or mistreatment.

Anorexia Eating disorder characterized by self-starvation and excessive weight loss.

ANS *See* Autonomic nervous system.

Antiplanning Setting goals and being firm about where one wants to go, but at the same time being flexible on how to get there.

Anxiety A heightened emotional state that is a psychological and physiological response to worry.

Appraisal support Type of help that provides affirmation, feedback, and information for self-evaluation.

Aromatherapy Therapeutic use of essential oils.

Asana Postures or physical exercises of **yoga**.

Ashtanga yoga Also known as power yoga; has more difficult poses than those in other yoga styles and requires moving from one pose to another in an effort to build strength, stamina, and flexibility.

Assertiveness Standing up for one's personal rights and expressing thoughts, feelings, and beliefs in direct, honest, and appropriate ways that do not violate another person's rights.

Autobiographical listening Listening from the perspective of one's own experience.

Autogenics Self-directed relaxation technique using suggestions that focus on warmth and heaviness in the body.

Autogenic training Method of reducing the stress response that uses suggestions focusing on warmth and heaviness; originated in Europe in the early years of the 20th century by the brain physiologist Oskar Vogt.

Autonomic nervous system (ANS) Branch of the nervous system responsible for many functions in the body that occur involuntarily, such as digestion, heart rate, blood pressure, and body temperature.

Awfulizing Mentally turning inconveniences or difficult situations into something awful, horrible, or terrible.

Ayurveda India's traditional system of natural medicine holding that all aspects of life contribute to health, including nutrition, hygiene, sleep, weather, and lifestyle, as well as physical, mental, and sexual activities.

B

Bikram yoga A style of yoga that is done in a room 90 to 105 degrees Fahrenheit; moves sequentially through 26 postures performed in a precise order.

Binge eating disorder An eating disorder characterized primarily by periods of uncontrolled, impulsive, or continuous eating beyond the point of feeling comfortably full.

Bioelectromagnetic therapies Treatments that involve the unconventional use of electromagnetic fields.

Biofeedback A method that uses electronic devices to help a person develop voluntary control and consciously regulate autonomic activity, such as breathing, heart rate, muscle tension, skin temperature, and blood pressure, in order to improve overall health.

Biofield therapies Treatments intended to affect energy fields that purportedly surround and penetrate the human body.

Body composition Makeup of the body in terms of fat tissue in relation to lean body tissue (muscle, bone, organs).

Body scan A form of **passive progressive relaxation** involving focused, concentrated, nonjudgmental observation of the body.

Breathing meditation A type of **meditation** that uses the breath as the primary focus.

Breathwork A term used to describe a variety of stand-alone breathing techniques, as well as breathing techniques that are integral to other mind/body practices like yoga, tai chi, and qi gong.

Bruxism Grinding, gnashing, or clenching the teeth during sleep or during situations that make one feel anxious or tense.

Budget A plan to manage money in which the budgeter prioritizes spending to accomplish financial goals.

Bulimia Eating disorder characterized by a secretive cycle of binge eating followed by purging.

C

CAM *See* Complementary and alternative medicine.

Cardiorespiratory fitness Ability of the heart, lungs, and blood vessels to process and transport oxygen required by muscle cells so that they can meet the demands of prolonged physical activity.

Carotid pulse Heart rate measured at the carotid artery on the neck just under the jaw.

Chair massage A form of massage administered while the person receiving the massage is fully clothed and seated in a specially designed chair.

Chakra meditation A form of **meditation** that uses the **chakras** as the primary focus.

Chakras Energy centers in the body through which spiritual and emotional energies flow.

Chest breathing or thoracic breathing Breathing that is relatively shallow, in which the chest expands and the shoulders rise as the lungs take in air.

Chi Internal energy flow.

Chromotherapy A discipline that uses colors to treat individuals who have certain specific disorders.

Chronic stress Continuing stress provoked by unrelenting demands and pressures that go on for an extended time.

Classical music Traditional genre of music that seems to be highly effective in reducing the stress response.

Cognition Mental process that encompasses thinking and reasoning skills.

Cognitive appraisal One's interpretation of a **stressor**.

Cognitive dissonance A disparity or contradiction between one's behavior and beliefs, values, or self-image.

Cognitive distortion Magnifying thoughts out of proportion to their seriousness, resulting in excess stress.

Cognitive restructuring Changing the meaning or interpretation of **stressors**.

Cognitive therapy Helping a person think in new ways by focusing on cognitive distortions and then relearning thought processes as a way to alter negative emotions.

Comfort zone Any place, situation, relationship, or experience in which one does not feel any threat.

Command breathing Technique designed to release distractions, tensions, and discomforts with each exhalation.

Complementary and alternative medicine (CAM) A group of diverse medical and health care systems, practices, and products that presently are not considered to be part of conventional medicine.

Complementary medicine Therapies that are used together with conventional medicine.

Conditioned-response theory Theory proposing that when things happen in our environment, we are conditioned to respond in certain ways.

Conflict Expressed struggle between at least two independent parties who perceive incompatible goals, scarce rewards, and interference from the other party, in achieving their goals.

Connectedness Feeling of relatedness or regard to others, a sense of relationship to all of life, a feeling of harmony with self and others, and a feeling of oneness with the universe and/or a universal element or Universal Being.

Contemplation A form of **meditation** that uses a physical object as the primary focus.

Control Deeply held belief that one can directly influence a situation.

Cortisol One of the key stress hormones released from a portion of the **adrenal glands** called the **adrenal cortex**.

Craniosacral therapy A gentle, hands-on method of enhancing the function of a physiological body system called the craniosacral system.

Culture A pattern of learned behaviors based on values, beliefs, and perceptions of the world.

D

Decibels A unit for measuring the intensity of sounds.

Deep tissue massage Muscle compression with the heel of the hand, pads of the thumb, and even the elbow pressing deliberately along the grain of the muscle to release chronic tension in the body.

Detached observation Observing without judgment or expectations.

Dharana Concentration; being able to hold the mind on one object for a specified time.

Dharma A Hindu principle holding that when one finds his or her place in the puzzle of life it results in satisfaction in life; feeling fulfilled, happy, and worthwhile.

Dhyana The ability to concentrate on one thing (or nothing) indefinitely; **meditation**.

Diaphragm Large, umbrella-shaped sheet of muscle that is attached to the ribcage and is integral to breathing.

Diencephalon Central portion of the brain, responsible for regulating emotions, among other things.

Dietary Guidelines for Americans Science-based advice to promote health and reduce risk for major chronic diseases through diet and physical activity.

Discomfort zone A place where we do not naturally gravitate and usually try to avoid.

Distress The negative effects of **stress** that drain us of energy and surpass our capacity to cope.

Distributed study Spacing learning periods with rest periods between sessions.

Doodads Items purchased that are often unnecessary or unexpected, that negatively affect a budget more than a person might think.

Dopamine A chemical naturally produced by the body that makes us feel good and can help offset pain.

E

Ecospirituality The personal relationship between an individual and the environment.

Effortless effort Allowing directed action to happen without tension, based on an attitude of passive alertness.

Emotional freedom technique (EFT) An alternative therapy based on the theory that negative emotions are caused by disturbances or blockages in the body's flowing energy systems. Tapping on the meridian endpoints on the face and body while focusing on a current negative emotion or physical problem opens the energy pathway where the blockage is said to be stored.

Emotional health One of the five dimensions of health; involves the ability to understand feelings, accept limitations, and achieve emotional stability.

Emotional problems In **rational emotive behavior therapy**, disturbances over which one has total control.

Emotional support Help in building esteem and in providing comfort, love, trust, concern, and listening.

Empathic listening Active listening, seeking to truly understand the other person before seeking to be understood.

Endorphins Mood elevating, pain-relieving chemicals produced naturally by the brain.

Environment Everything both internal and external to an individual.

Environmental stressor Some aspect of the environment that is perceived as annoying, distracting, uncomfortable, or stressful.

Epinephrine Also known as adrenaline, a hormone secreted by the medulla (inner portion) of the **adrenal gland**, which (together with **norepinephrine**) brings about changes in the body known as the **fight-or-flight response**.

Episodic acute stress Frequent bouts of **acute stress**.

Ergonomics The study of individual workers and the tasks they perform, for the purpose of designing appropriate and safe living and working environments.

Eustress Positive, desirable **stress** that keeps life interesting and helps to motivate and inspire.

External environment The objects, conditions, and situations that surround us.

External locus of control A belief that whatever happens to one is unrelated to one's own behavior; what happens to a person is beyond his or her control.

F

Faith Belief in, or commitment to, something or someone that helps a person realize a purpose.

Faith factor The concept that explains that power is added when one combines the quieting effect of **meditation** with the power of one's beliefs.

Fear Anxious or agitated feeling based on the perception of impending danger or threat.

Feng shui Ancient Chinese study of the natural environment based on the belief that physical and emotional well-being is strongly influenced by the immediate environment.

Fight-or-flight response The body's automatic physiological response that prepares the individual to take action upon facing a perceived threat or danger.

Flexibility Ability of the joints to move freely through a full range of motion.

Forgiveness Psychological peace that comes when psychologically injured people release their grievances against others.

Full breathing Technique that involves breathing in first to the lowest parts of the lungs and then slowly filling up the rest of the lungs while inhaling.

G

General adaptation syndrome Process in which the body tries to adapt to chronic stress; consists of three stages—alarm, resistance, and exhaustion.

Glycemic index A measure of how quickly foods convert into blood sugar.

Going with the flow Accepting situations one can't control.

Guilt Conscious preoccupation with undesirable past thoughts and behaviors.

H

Hardiness The term used to describe a combination of personality characteristics including the traits of commitment, challenge, and control.

Hassles The irritating, frustrating, or distressing incidents that accompany everyday existence.

Hatha yoga Collectively, **asanas** (postures or poses), **pranayamas** (breathing techniques), and **pratyahara** (meditation) designed to reduce stress and restore balance.

Healing environment Surroundings in which one is supported and nurtured, in which one feels calm, and in which health and well-being are promoted.

Heat effect The observed higher rates of aggression by people in hot environments compared to cooler environments.

Heat hypothesis Theory holding that hot temperatures can promote aggressive motives and behaviors.

Holistic health A view of health that encompasses physical, intellectual, emotional, spiritual, and social dimensions.

Homeostasis The body's natural state of balance or stability.

Hostility An attitude motivated by hatefulness and animosity.

Hot stone massage Form of massage using stones that are heated and positioned on specific areas of the body.

Humor An intellectual expression intended to induce **laughter**.

Hypnosis A state of attentive, focused concentration with suspension of some peripheral awareness characterized by extreme suggestibility, relaxation, and heightened imagination.

Hypothalamus Chief region of the brain for integrating **sympathetic** and **parasympathetic** activities from higher-order thinking.

I

Imagery Flow of thoughts that incorporates sensory qualities from one or more of the senses.

Important In time management terms, refers to those things that would make a long-term difference.

Inbreath Physiological process of bringing air into the lungs.

Incremental muscle relaxation Progressive relaxation exercise done by tensing muscle groups first maximally, then 50% of maximal, then 10% of maximal, holding each tense for 15 to 30 seconds followed by resting periods of 15 to 30 seconds between each tensing.

Informational support A form of help consisting of intangible things such as giving advice, suggestions, and directives.

Instrumental support A type of assistance that provides tangible things such as money, use of a car, or a place to stay.

Instrumental values Values that consist primarily of personal characteristics and character traits that tend to lead toward **terminal values**.

Integrative medicine Practice that combines both conventional and **complementary and alternative medicine** (CAM) treatments for which there is evidence of safety and effectiveness.

Integrity The ability to carry out a worthy decision.

Intellectual health One of the five dimensions of health, refers to the ability to think and learn from experiences, assess and question new information, and be open to new learning; also termed **mental health**.

Interleukins Chemical messengers that enable **lymphocytes** to communicate with each other.

Internal locus of control The belief that your own actions result in specific outcomes, that what you experience is based on your actions and efforts.

Iyashi Japanese word denoting a combination of healing, calming, and getting close to nature.

Iyengar yoga A classical style of **yoga** that is softer on the body than other forms; well-suited for beginners and those who haven't exercised in a while.

J

Journaling A way of releasing emotions by writing down one's thoughts about them.

K

Karoshi Japanese word meaning death by overwork.

Koyaanisqatsi A Hopi Indian word meaning crazy life, life in turmoil, or life out of balance.

Kripalu yoga A form of **yoga** that is more spontaneous, flowing, and meditation-orientated than other forms.

Kundalini yoga A form of **yoga** that incorporates mantras (chanting), meditations, visualizations, and guided relaxation.

L

Latte factor A metaphor referring to spending money on things that could be cut back without involving a significant lifestyle change and still make a significant difference in a budget.

Laughter A vocal expression of amusement or good **humor**.

Learned optimism The outcome of positive **self-talk** and **thought stopping**.

Learned response theory Theory stating that when one associates a specific environment with something painful in that environment, the two get linked together.

Levels of responding Ways by which people commonly react to situations, and the accompanying emotional consequences.

Lifebalance A healthy time-management method that promotes purposeful planning combined with going with the flow.

Locus of control The way we ascribe our chances of success or failure in a future venture to either internal or external causes.

Lo-pan A special compass, used by practitioners of ***feng shui***, designed to determine the energy characteristics of a building or room.

Lotus position Sitting on the floor or a mat cross-legged with each foot resting on the opposite thigh.

Lymphocytes White blood cells with the function of killing infectious agents.

M

Management The art or manner of controlling.

Mantra A repeated word, sound, or phrase as a point of focus during **meditation**.

Mantra meditation A type of **meditation** that combines the four factors common to most meditation: (1) a mental device, (2) a passive attitude, (3) decreased muscle tone, and (4) a quiet environment.

Massed study Time spent learning in concentrated, unbroken intervals.

Medical resonance therapy music Music originally composed by German musicologist Peter Huebner, used as therapy and based on the principle of **resonance**.

Meditation A conscious mental method of systematically allowing the mind to focus gently on a single item.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

Melatonin A sleep-related hormone that is secreted in increased levels in the dark.

Mental health A dimension of health in which the mind is engaged in lively, healthy interaction both internally and with the surrounding world; also termed **intellectual health**.

Meridians Invisible channels of energy that flow in the body.

Meta-analysis A system of combining data from several different research studies to gain an overview of a topic that is more significant than a single investigation.

Mindful writing Writing whatever comes to mind at the moment, to allow insights and inspiration from the intuition to bubble to the surface.

Mindfulness The state of being attentive to, and aware of, what is taking place in the present.

Mindfulness-based stress reduction A participatory wellness program based on mindfulness meditation, wherein participants are taught how to work with aspects of awareness.

Mindfulness self-efficacy The level of confidence a person must have to maintain nonjudgmental awareness.

Mindlessness A state of mind in which one's thoughts are not in the present moment and when one tunes out what is happening here and now.

Monochromic time Time seen as linear; things occur one at a time.

Motor unit A single motor nerve and all the muscle fibers to which it sends impulses.

Mozart effect Music of Mozart used as a healing tool in therapeutic treatment.

Muscle contraction Shortening of the muscle fibers.

Muscle endurance Ability of muscles to function over time with support from the respiratory and circulatory systems.

Muscle fitness A combination of muscle strength and endurance.

Muscle strength The ability of skeletal muscles to engage in work; relates to the force a muscle can exert.

Music therapy The practice of using music to heal.

Myocardial stunning A unique medical condition in which severe emotional stress causes heart abnormalities, including heart failure.

Myotherapy A form of massage characterized by concentrated pressure applied to the trigger points for a short time (several seconds to two or three minutes) by the fingers, knuckles, and elbows to reduce pain, relax muscle spasms, and improve circulation.

MyPlate The current nutrition guide depicting a place setting with a plate and glass divided into five food groups. It replaced the USDA's MyPyramid guide.

N

Namaste Translation: "I honor the place in you where the entire universe resides. I honor the place in you, where lies your love, your light, your truth, and your beauty. I honor the place in you, where . . . if you are in that place in you . . . and I am in that place in me . . . then there is only one of us."

Natural killer cells Specialized cells that seek out and destroy foreign invaders in the body.

Naturopathy One of the oldest forms of medicine; combines healing traditions of many cultures with modern principles to encompass the diagnosis, treatment, and prevention of disease, as well as the promotion of health.

New Age music A genre of modern music characterized by a relaxing or peaceful quality based on quiet harmonies.

Niagara syndrome The feeling, comparable to a midlife crisis, that occurs when people don't take a good look at who they are and where they are going.

Niyama Term for "observance," relating to purity, contentment, tolerance, study, and remembrance.

Nocebo effect Sickness and death resulting from expectations of negative outcomes and from the associated emotional states.

Norepinephrine Also known as noradrenalin, a hormone secreted by the medulla (inner portion) of the **adrenal gland**, which (together with **epinephrine**) brings about changes in the body known as the fight-or-flight response.

O

Optimists Those who tend to see what is right and good about situations.

Outbreath The physiological process of expelling air from the lungs.

P

Parasympathetic nervous system Branch of the **autonomic nervous system** that returns the physiology to a state of **homeostasis**, or balance, after the threat, danger, or potential pain is no longer perceived to be imminent.

Pareto's law A principle suggesting that in many activities, 80% of the potential value can be achieved from just 20% of the effort; the remaining 80% of effort results in relatively little return.

Passive alertness A state of mind, during relaxation technique practice, that is relaxed, nonstriving, and unconcerned with the end product.

Passive progressive relaxation A method of progressing through the various parts of the body that promotes relaxation using a focused observation technique called the **body scan**.

Perceived noisiness Subjective assessment of noise that combines the decibel level and the context in which a noise occurs.

Perception A person's cognitive (mental) interpretation of events.

Pessimism A general attitude of assuming the worst.

Pessimists Those who tend to see what is wrong and bad about situations.

Physical health One of the five dimensions of health; involves the cells, tissues, organs, and systems functioning together in good working order.

Pineal gland Gland in the brain that produces **melatonin**.

Placebo A drug or treatment used as an inactive control in a test; although a placebo is believed to lack a specific effect, it often elicits a positive response because of the patient's expectation of benefits.

Placebo effect A result created by the belief that one will benefit from an intervention.

Planning The act of bringing future events into the present so that appropriate control can be applied.

Polychromic time Time seen as a natural rhythm in which several things can happen at once, and not controlled by human beings.

Power language Speaking that boosts a feeling of control simply by changing the words used.

Power Nap A means of relaxation that combines deep breathing, **mindfulness**, and **yoga** to relax and rejuvenate body and mind.

Practical problems According to **rational emotive behavior therapy**, experiences over which the individual has little, if any, control.

Prana Term for energy that flows through the body.

Pranayama Sanskrit term referring to control of breath: *prana* (life energy), and *ayam* (control); in yoga, breathing techniques.

Pratyahara In preparation for **meditation**, withdrawal of the mind from the senses.

Premature cognitive commitments Efforts to bring about results that coincide with one's self-limiting beliefs.

Procrastination Avoidance of doing a task that needs to be accomplished.

Progressive muscle relaxation (PMR) Muscle relaxation in which each muscle is forcibly contracted, then released in sequence. Another term for **progressive neuromuscular relaxation**.

Progressive neuromuscular relaxation (PNR) Muscle relaxation in which each muscle is forcibly contracted, then released in sequence. Another term for **progressive muscle relaxation**.

Progressive relaxation Another term for **progressive neuromuscular relaxation**.

Psychological health Healthy awareness and control of ones thoughts and feelings.

Psychoneuroimmunology Interactions among the nervous system, the psyche, and the immune system, and their implications for health.

Psychophysiological Another term for **psychosomatic**.

Psychosomatic A descriptive term originating from the core words *psyche*, meaning the mind, and *soma*, meaning the body; usually refers to conditions that have both a mind and body component.

Q

Qi gong A Chinese therapy involving physical movement and breathing exercises designed to circulate the internal vital energy.

Quadrant Planning Time management method focusing on activities with reference to importance and urgency, and putting "first things first."

R

Radial pulse Heart rate measured at the radial artery on the thumb side of the wrist.

Rapid eye movement (REM) sleep Sleep phase when dreaming occurs.

Rational emotive behavior therapy Treatment based on the premise that stress-related behaviors are initiated by self-defeating perceptions that can be changed.

Reality What is; what is happening.

Reduced respirations technique Breathing method designed to lower the breathing rate to between 10 and 12 breaths per minute and even slower.

Reference anxiety State of mind that stems from people judging their possessions in comparison with others, not based on what they need.

Reference daily intakes (RDI) The recommended amounts of nutrients to be eaten each day to meet the needs of most healthy people.

Reflexology Therapy based on a system of points in the hands and feet that are believed to correspond to areas of the body.

Reframing Another term for **cognitive restructuring**.

Reiki A healing technique that channels the universal life energy to recipients through the practitioner's hands with the goal of raising the amount of qi in and around the recipient.

Relaxation The process of effectively moving the mind/body from the stress response to the relaxation response.

Relaxation guided imagery (RGI) Technique designed to connect with the subconscious mind in a way that will activate the relaxation response by using the imagination in a directed way toward a specific image, scene, or sensation.

Religiosity Participation in, or adherence to, the beliefs and practices of an organized religion.

Resonance Precise harmony contained in a musical structure that resonates inside the human body, from the ears to the brain and from the brain to various organs.

Respiration rate Number of breaths taken in one minute.

Relaxing breathing Technique designed to allow the breath to go as deep as possible into the lowest parts of the lungs.

Road rage Aggressive and dangerous driving behaviors directed at other motorists.

Runaway eating The consistent use of food and food-related behaviors—such as purging or exercising excessively—to deal with unpleasant feelings and the sense that these feelings are out of control.

S

Samadhi Absorption; realization of the essential nature of the self.

Sarcasm An element of **humor** that can be used as a form of aggression to put people down.

Seasonal affective disorder (SAD) A condition characterized by depression related to lack of light in seasons with short days.

Self-efficacy Belief in one's ability to accomplish a goal or change a behavior.

Self-limiting beliefs Faulty notion that one does not have the ability to carry out specific tasks.

Self-talk The messages one sends to oneself; internal dialogue.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

Sensory overload A cluttered mind that results from accumulating thoughts that compete for attention.

Serendipity Quality that, through good fortune and sagacity, allows a person to discover something good while seeking something else.

Serotonin A mood-enhancing chemical that the body produces naturally.

Shalom A Hebrew term that means more than wellness or wholeness and can best be translated as "peace."

Shiatsu Japanese-based therapy system that uses finger pressure applied to specific points along acupuncture meridians.

Simple diaphragmatic breathing Technique that focuses on the in and out movement of the abdomen during inhalation and exhalation.

Sivananda yoga A form of **yoga** that has a series of 12 poses and, as its foundation, the sun salutation, breathing exercises, relaxation, and mantra chanting.

SMART goals Goals that are **S**pecific, **M**easurable, **A**ction-oriented, **R**ealistic, and **T**ime-based.

Social health One of the five dimensions of health; refers to involvement with others and expressing care and concern for others.

Social support An individual's knowledge or belief that he or she is cared for and loved, belongs to a network of communication, and has a mutual obligation with others in the network.

Somaticizing The body's way of turning mental stress into physical manifestations.

Spiritual Refers to a belief in, and devotion to, a higher power beyond the physical realm.

Spiritual dimension One of the five dimensions of health, an inner quality that goes beyond religious affiliation and strives for inspiration, reverence, awe, meaning, and purpose.

Spiritual health The result of discovering a basic purpose in life and learning how to experience love, joy, peace, and fulfillment.

Spirituality A means of giving meaning to existence, a sense of purpose in life, and a relationship or sense of connection with a higher power.

Sports massage A special type of massage involving muscle systems specific to athletic participation.

Stream of consciousness The constant flow of thoughts through the mind.

Stress The physiological response that is activated when the mind perceives a threat.

Stressor Any event or situation that an individual perceives as a threat; precipitates either adaptation or the stress response.

Suggestion Statement that the mind believes is true, accurate, or real.

Sutoresu Japanese word for stress.

Swedish massage Massage, usually done with lotions or oils, consisting of long, gliding strokes, kneading, friction, tapping, and shaking motions on the upper or more superficial layers of the muscles; the most common type of basic relaxation massage.

Sympathetic nervous system Branch of the **autonomic nervous system (ANS)** responsible for initiating the fight-or-flight response each time one perceives potential danger or pain.

T

Tai chi A popular form of exercise in China that consists of a precise sequence of slow, graceful movements, accompanied by deep breathing and mental attention, to achieve balance between body and mind and to focus vital energy.

Technosis A state of being so immersed in technology that one risks losing identity.

Technostress Feelings of dependence, incompetence, anxiety, and frustration associated with technology.

Tend-and-befriend response Theory proposing that females are more likely than males to respond to stressful circumstances by nurturing offspring to protect them from harm (tending), and befriending (creating and joining social groups to exchange resources and provide protection).

Terminal values Outcomes that one works toward or believes are most important and desirable; end states of feeling.

Therapeutic touch Therapy based on the premise that the human body is surrounded by, and permeated with, an energy field that is connected with the universal life energy.

Thought-stopping Ceasing negative thoughts when they enter the **stream of consciousness**.

Thought-watching Inner mindfulness **meditation** that uses one's random thoughts as the primary focus.

Time The occurrence of events in sequence, one after another.

Time management The art or manner of controlling the sequence of events in life.

Time zapper Something that takes away time from what is more important.

Traditional Chinese medicine (TCM) Therapies that involve a variety of carefully formulated techniques, such as **acupuncture**, herbal medicine, **massage, qi gong**, and nutrition.

Transcendental meditation (TM) A type of **meditation** in which one goes into a meditative state by repeating a special, individualized **mantra**.

U

Ujjayi breathing Method of breathing that has a soothing, rhythmic, oceanic quality and is commonly done while practicing yoga.

Unreality What is not; what is not happening.

Urgent Describes things that demand our immediate attention.

V

Value A belief upon which one acts by preference.

Values acquisition The conscious assumption of a new **value**.

Values clarification The process of defining and applying what one truly values.

Vasodilation Increase in the diameter of blood vessels in response to activation of the **parasympathetic nervous system**.

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

Vipassana Literally, "seeing clearly."

Visualization Using the imagination to picture or see a place or thing.

Visualization breathing Breathing technique that combines **full breathing** with visualization.

W

Walking meditation A form of meditation in which physical movement is the primary focus.

White noise The soft sounds of nature, such as running water or rainfall, or soft music that is used to help drown out other sounds that may be distracting and stressful.

Worry Conscious preoccupation with events yet to come.

Y

Yama Yoga term for "restraint," relating to refraining from violence, lying, stealing, casual sex, and hoarding.

Yerkes–Dodson principle A tenet holding that a certain amount of stress is healthy, useful, and even beneficial, but when stress exceeds one's ability to cope, the overload contributes to diminished performance, inefficiency, and even health problems.

Yoga A system of physical postures, breathing techniques, and meditation to promote bodily or mental control and well-being.

Yoga sutras A collection of yoga theories and practices assembled by the Indian sage Patanjali.

Index

Page numbers followed by *f* indicate figures; and those followed by *t* indicate tables.

A

ABC123 prioritized planning, 167–169
ABCDE technique, 89–90
ABCs of money management, 186–189
Abdominal breathing, 18, 271
Absence of symptoms, 40
Academic demands, 10, 10*f*
Acceptance, 84*t*, 86–87
Acceptance of what is happening, 98–99
Accommodating style of conflict resolution, 216–217
Active progressive muscle relaxation, 293–295
Active progressive script, 294–295
Activity log, 179, 182
Acts of service, 209
Acupressure, 352
Acupuncture, 351–352, 353
Acute stress, 4–5, 37
Adagio movements, 366
Adolescence, 100
Adrenal cortex, 34
Adrenal glands, 34
Adrenal medulla, 34
Adrenaline, 34
Advertising, 133–134
Aeschylus, 120
Affirmation, 140
Affluenza, 196, 197
Agape, 156–157
Aggressive driving, 122
Aging
  happiness and, 126
  premature, 50–51
  stress levels and, 186
Aimless people, 132
Air quality, 227
Alarm stage (GAS), 38–39
Alaska Native culture, 134, 136
Albom, Mitch, 370–371
Alcohol use/abuse, 254–255
Alice in Wonderland (Carroll), 151
All-or-none principle, 291
All-or-nothing thinking, 76
Allen, James, 74, 83
Allen, Robert F., 201
Allostatic load, 45–46
Allowance/acceptance, 84*t*, 86–87
"Alone together," 209
Alpha brainwave activity, 320
Alternating nostril breathing, 276
Alternative medical systems, 346, 347–349
Alternative medicine, 345–346. *see also* Complementary and alternative medicine (CAM)
Altruism, 131, 155–157
Alzheimer's disease, 114
Ambiance therapy, 366
Amenemope, 195
American Association of Retired Persons (AARP), 197
American Indians. *see* Native Americans
American society. *see* United States
Ancient Egyptians, 233
Ancient Greeks, 233
Anger, 111, 121–125
  constructive anger, 124
  defined, 122
  destructive anger justification, 124
  destructive anger rumination, 124
  effects of, 123
  elements, 122
  expressing, 124–125
  heart diseases and, 124
  hostility and, 126
  keeping anger in check, 125
  letting go of, 122
  our rules about everyday events, 123–124
  road rage, 122
  sources of, 122–123
  venting, 125
Anger blockers, 125
Anger journal, 125
Anorexia, 250
Antiplanning, 175
Anxiety, 112
  breathing techniques and, 273
  PMR and, 292–293
Appraisal support, 203
Aquarium, 231
Ardell, Don, 22
Ardell Wellness Stress Test, 22–23, 23*f*
Aristotle, 164
Aromatherapy, 226–227
Aromatherapy products, 226–227

Arousal phase (laughter), 363
Artificial light, 225
Artwork, 231
Asana, 328, 331–332
Ashtanga yoga (power yoga), 329
Asking questions, fear and, 120
Assertiveness, 215
Assessment, money management, 186–187
Assuming the worst, 76
AT. *see* Autogenic training (AT)
Attachment/rightness, 84, 84*t,* 87
Autobiographical listening, 211–212
Autogenic suggestions, 284
Autogenic training (AT), 282–283. *see also* Autogenics
Autogenic Training (Schultz), 282
Autogenic Training in Psychotherapy (Schultz/Luthe), 284
Autogenics, 281–287
    autogenic training (AT), 282–283
    benefits, 283
    case study, 283
    creating favorable conditions, 284
    defined, 282
    effortless effort, 284
    historical overview, 282–283
    how it works, 283
    sample script, 284–286
    suggestions, 282
    vasodilation, 283
Autonomic nervous system (ANS), 33
Avoidance style of conflict resolution, 216
Awareness, 98
Awfulizing, 76, 89
Ayam, 272
Ayurveda, 348

B

Babson, Roger, 107
Bach, David, 189
Bach, Richard, 68, 116
Back stretch, 339*t*
Balance, 171, 173–174
Balanced breathing, 276
Balancing attitude, 175
Bamboo plant-grass reed metaphor, 81
Baptiste, Baron, 332
Base chakra (red), 318
Beginner's mind, 97
Being like a child, 97
Bell, Alexander Graham, 77
Belly breathing, 18, 271
Belly turning pose, 340*t*
Benson, Herbert, 261, 314
Beskind, Dan, 40
"Big Five" of relationship stressors, 208
Bikram yoga, 329
Binge eating disorder, 251
Bioelectromagnetic-based therapies, 347
Biofeedback, 349
    for stress reduction, 350
    temperature, 349
Biofield therapies, 347
Biologically based therapies, 347, 350
Blaming the victim, 55
Blood glucose levels, 249
Boat bow, 339*t*
Body composition, 244
Body image, 252
Body scan, 295–296
Booth, Leo, 152
Boredom, 40, 83
Bow pose, 338*t*
Brain
    color schemes, 225
    forgiveness and, 155
    hypothalamus, 34
    lavender and, 227
    lemon and, 227
    meditation, 320
    multitasking, 235
    noise and, 229
    sandalwood and, 227
    stress and, 9, 35*f*
Breaking large task into smaller tasks, 178
Breast cancer survivor, 151
Breath counting meditation, 317
Breathing, 18, 269–279
    abdominal, 18, 271
    chest, 18, 271
    command, 277–278
    exercises, 273–278
    full, 277
    inbreath/outbreath, 271
    job stress and, 194
    left-nostril, 277
    meditation, 17
    natural, 271, 274
    pelvic tilt with diaphragmatic breathing, 278
    pranayama, 272
    purpose, 270–271
    reduced respirations technique, 275–276
    relaxing, 272–275
    right-nostril, 276–277
    self-assessment, 17
    simple diaphragmatic, 274
    visualization, 277
    while stretching, 278
    yoga, 332
Breathing meditation, 316–317
Breathwork, 270
Bridge pose, 339*t*
Bronze Olympic medal winners, 79
Brow chakra (indigo), 318
Brown, Tom, 277

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

Brown, Tom, Jr., 148
Bruxism, 47, 291
Buddha, 45, 122, 136, 316
Buddha's Little Instruction Book (Kornfield), 316
Budget, 187–188
Bulik, Cynthia, 250
Bulimia, 251
Burdette, Robert Jones, 112
Burke, Janis, 226
Burroughs, John, 160, 221
Buscaglia, Leo, 113, 196, 205, 210, 211, 218
Bush, George W., 50
Byrd, Randolph, 158

C

Caffeine, 248
"California Screamin'," 101
CAM. *see* Complementary and alternative medicine (CAM)
Campbell, Don, 366
Cangleska Wakan, 135
Cannupa, 135
Canon in D (Pachelbel), 366
Cardiac stunning, 37
Cardiorespiratory fitness, 244
Cardiovascular disease, 48–49
Carlson, Richard, 16
Carotid pulse, 17
Carroll, Lewis, 151
Casarjian, Robin, 154
Casey, B. J., 236
Cash-flow plan, 187
Castaneda, Carlos, 90
CBT
Cellular deterioration, 50–51
Cellular growth and repair, 49
Chair massage, 356
Chakra meditation, 318
Chakras, 318
Challenge, 64, 66–67
Chapman, Gary, 208–209
Chest breathing, 18, 271
Chi, 152, 232, 350
Chicago Tribune, 365
Chief Seattle, 269
Childbirth, 227
Childhood value messages, 135
Childre, Doc, 36
Child's pose, 337*t*
Chinese proverb, 237, 289
Choice, 82–83. *see also* Thinking and choosing
Choices, 11
ChooseMyPlate, 246–247
Chopra, Deepak, 62, 153, 261, 311
Choudhury, Bikram, 329
Chromotherapy, 224–225
Chronic stress, 6, 37–38, 38*f*
  aging process, 50–51
  bruxism, 47
  cardiovascular disease, 48–49
  cellular deterioration, 50–51
  common cold, 48
  direct and indirect effects of, 45
  fatigue, 46
  headache, 46
  immune system, 48, 49–50
  long-term, 48–52
  medium-term, 46–48
  muscle tension and pain, 46
  sleep disturbances, 47
  sore throat, 47
  stress-related conditions, 48, 51–52
  upset stomach, 46
Chuang Tzu, 85
Churchill, Winston, 157
Classical music, 366
Coffee, 248
Cognition, 65
Cognitive appraisal, 65
Cognitive behavior therapy (CBT), 77
Cognitive dissonance, 132
Cognitive distortion, 65, 75–76
Cognitive restructuring, 65
Cognitive therapy, 76
Cohen, Sheldon, 48, 205, 210
Collaborating style of conflict resolution, 217–218
College students
  community service and, 155, 156
  exercise, 244*f,* 245
  humor, 363
  spiritual changes in, 147
  weight gain, 250
Color, 224–225
Comfort zone, 117, 177
Command breathing, 277–278
Commitment, 66
Common cold, 48, 55
Communication, 210–215
  autobiographical listening, 211–212
  conflict resolution, 215–218
  empathic listening, 212–213
  gender differences, 214–215
  importance, 210–211
  listening, 211–213
  touching, 214
Communication, mind-body, 52–56
Community service, 131
Compassion for others, 153–157
Competing style of conflict resolution, 217
Complementary and alternative medicine (CAM), 344–358
  acupressure, 352
  acupuncture, 351–352, 353
  alternative medical systems, 346, 347–349
  alternative medicine, 345–346

Complementary and alternative medicine (CAM) (*continued*)
  ayurvedic medicine, 348
  bioelectromagnetic-based therapies, 347
  biofield therapies, 347
  biologically based therapies, 347, 350
  categories, 346–347
  complementary *versus* alternative, 345–346
  cost of, 346
  defined, 345
  EMG, 349
  emotional freedom technique (EFT), 351, 352
  energy therapies, 347, 350–353
  GSR, 349
  integrative medicine, 346
  manipulative and body-based methods, 347, 353–354
  massage, 355–357
  mind/body interventions, 347, 349–350
  naturopathic medicine, 348–349
  NCCAM, 345
  popularity, 349
  Qi gong, 352
  reflexology, 351, 351*f*
  reiki, 352
  shiatsu, 352
  Tai chi, 352, 353
  temperature biofeedback, 349
  ten most common CAM therapies, 346*f*
  therapeutic touch, 352, 355
  Traditional Chinese Medicine (TCM), 348, 349
Complementary medicine, 345
Complex carbohydrates, 247
Compliments, 209
Compromising style of conflict resolution, 217
Compulsive overeating, 251
Computer vision syndrome (CVS), 236
Concealing symptoms, 40
Conditioned-response theory, 81–82
Conflict, 215
Conflict resolution
  accommodating style, 216–217
  avoidance style, 216
  collaborating style, 217–218
  competing style, 217
  compromising style, 217
Connectedness, 153
Conscious and subconscious mind, 302–303
Constructive anger, 124
Contemplation, 317
Continuous partial attention, 235
Control
  money management, 188–189
  perception, 66, 67–70
Convenience, exercise and, 245–246
Coping style, 23
Cork-drifting-down-a-stream metaphor, 86–87
Coronary care unit, 158
Corporate health-promotion programs, 146
Corporate massage, 356
Corpse pose, 340*t*
Cortisol, 34, 67
  adrenal cortex, 34
  cardiac health and, 49
  central/abdominal fat, 35*f*, 51
  emergencies, 9
  immune response, 48
  renal hypertension, 35*f*
  weight gain, 249–250
Cost
  complementary and alternative medicine, 346
  exercise and, 245–246
Count your blessing, 86
Cousins, Norman, 362
Covey, Stephen, 110, 133, 138, 170, 171, 207, 211, 212, 301
Cowards, 120
Cramming, 178
Craniosacral therapy (CST), 355–356
Cranium, 355
Creating Health (Chopra), 62
Creative Visualization (Gawain), 306
Credit cards, 191–193, 195
Crisis makers, 178
CrossFit, 244
Crown chakra (violet or white), 318
CST
CT-PTSD, 77
Culture of doing, 100
Culture, values within, 136–137
Cummings, E. E., 139
Current spending habits, 186
CVS

D

da Vinci, Leonardo, 96
Daily hassles, 11–12
Daily stress diary, 25, 27
Dalai Lama, 153
Dancing pose, 336*t*
Davis, Chip, 366
Daydreaming, 99
dB, 228, 229*f*
Debt, 185, 191, 192
Decibels (dB), 228, 229*f*
Deep breathing, 18
Deep tissue massage, 355
Defiers, 178
Delegation, 179, 194
Denton, Andrew, 38
Depression
  mobile phone use, 236
  natural light and, lack of, 225
  sleep and, 253
  work, 193
Destructive anger justification, 124
Destructive anger rumination, 124

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

Detached observation, 98
Dharana, 328
Dharma, 131
Dhyana, 328, 333
Diabetes, 51, 246
Diaphragm, 271
Diaphragmatic breathing, 18, 271, 274
  pelvic tilt with, 278
Diencephalon, 34
Diener, Ed, 196, 203
Dietary Guidelines for Americans, 246
Difficult and unpleasant tasks, 180
Digesting food, 248
Digestive system, 35*f*
Dillard, Annie, 159
Discomfort zone, 117
Discounting the positive, 76
Discovery, 84*t,* 86, 87
Disney Brothers Cartoon Studio, 67
Distress, 3*f,* 4
Dodson, John, 3
Donne, John, 202
Don't Sweat the Small Stuff ... and It's All Small Stuff (Carlson), 16
Doodads, 189–191
Dopamine, 67, 242, 249
Dossey, Larry, 54, 158
Double dribbling, 123
Downgrade needs to preferences, 81, 89
Downward dog pose, 337*t*
Dreamers, 177
Dropbox, 181
Drug use/abuse, 256
Dyer, Wayne, 153
Dykema, Ravi, 278, 332

E

Eating disorders, 250–252
  anorexia, 250
  binge eating disorder, 251
  bulimia, 251
  causes, 251
  interpersonal factors, 251
  psychological factors, 251
  runaway eating, 250
  social factors, 251
Eating to cope, 249
Ecospirituality, 158
Edison, Thomas, 67
EEG, 349–350
Effective/ineffective responding, 83–88, 84*t*. *see also* Levels of responding
Effortless effort, 284
EFT, 351, 352
80:20 rule, 165–166
Einstein, Albert, 153, 164. 232, 281, 300
Einstein Mind, 51
Eisner, David, 131
Elderhood, 100
Electroencephalogram (EEG), 349–350
Electromyogram (EMG), 349
Elephant-trained-for-circus response, 82
Elimination of nonessentials, 180
Eliot, George, 364
Eliot, Robert, 36, 81
Elliott, Robert, 360
Ellis' 12 irrational ideas, 77–78
Ellis, Albert, 76, 88
Emerson, Ralph Waldo, 18, 59, 107, 116, 121, 129, 156
EMG, 349
Emmons, Robert, 86
Emotional freedom technique (EFT), 351, 352
Emotional health, 7, 8*t*
Emotional problems, 88
Emotional stress, 111–112
Emotional support, 203
Emotions, 110–126
  anger, 111, 121–125
  benefits of positive emotions, 112
  comfort/discomfort zones, 117–118
  fear, 111, 116–118
  guilt and worry, 112–116
  hostility, 126
  money management, 186–187
  physiology, 111–112
  test anxiety, 113–115
Empathic listening, 212–213, 218
Employment decisions and finances, 10
Endocrine system, 34
Endorphins, 243, 357, 363
Energy drinks, 248
Energy therapies, 347, 350–353
Enjoyment, exercise and, 245
Environment, 23, 25, 222
Environmental stressors, 11, 222. *see also* Healing environment
Epel, Elissa, 50
Epinephrine, 34
Episodic acute stress, 5, 45
Ergonomics, 233–234
Essential oils, 227, 254
eaTracker, 246
Eustress, 3*f,* 4, 363
Evaluation (how did I do?), 172–173
Everly, George, 30
Evernote, 181
Exercise, 115, 242–246
  benefits, 243
  breathing, 273–278
  components of physical fitness, 244
  "feel-good" brain chemicals, 243
  sticking with an exercise routine, 245–246
  stress and, 19
  stress buffer, 242–243
  type, mood and, 245*t*

Exhilaration, stress and, 5
Expressing anger, 124–125
Expressive writing, 115
External environment, 222
External locus of control, 69
Eyre, Linda, 173
Eyre, Richard, 173, 176

F

Facebook, 178, 236, 237
Faith, 152
Faith factor, 315
Family expectations and family life, 10
Family rituals, 206
Fatigue, 46, 54
Fear, 111, 116–118
    asking questions and, 120
    facing, 119
    factors, 118–120
    fear–faith connection, 120
    strategy for overcoming, 120
    types, 116, 116*t*
Fear of failure, 67
Fear of missing out (FOMO), 235
Fear–faith connection, 120
"Feel-good" brain chemicals, 243
Feng shui, 232–233
Ferraro, Kenneth, 157
Fibromyalgia, 54
Fight-or-flight response, 32–33, 36, 46, 111, 249
Finances, 10
Financial goals, 187–188
Financial management. *see* Money management
First things first, 170
Fisherman story, 175
FIT formula, 40
Five Love Languages, The (Chapman), 208
Flexibility, 244
Flowing comfort, 296
Floyd, Ray, 301
Focused attention, 290, 294
FOMO, 235
Food/mood connection, 249. *see also* Nutrition
Forgiveness, 153–155
    defined, 154
    factor, 155
    inner peace and, 155
Forgiveness exercise, 155
Fox style of conflict resolution, 217
Frank, Anne, 231
Frankl, Victor, 83
Frankl, Viktor, 151
Franklin, Ben, 141, 163, 197
Freedman, Robert, 273
Freeman, Lyn, 103, 111, 157, 158
Frequency, 40
Friedman, Daniel, 62–63
Friedman, Meyer, 126
Friends, 203, 206. *see also* Social support
Front body stretch, 339*t*
Fruits and vegetables, 247
Full breathing, 277
Full locust pose, 338*t*
Full-spectrum lamps, 226
Full Throttle, 248
"Funnies file," 363

G

Gallway, Timothy, 102, 259
Galvanic Skin Response (GSR), 349
Gaming marathon, 180
Gandhi, Mahatma, 131, 132
GAS, 38–39, 45
Gawain, Shakti, 306
Gender. *see also* Men; Women
    alcohol dependence, 256
    communication, 214–215
    dealing with stress, 214–215
    exercising while in college, 244*f*
    humor, 363
    time and life management, 165, 166*f*
General adaptation syndrome (GAS), 38–39, 45
Genetics, 23
Gift giving, 209
Ginseng, 350
Glucose, 249
Glycemic index, 247
Glycogen, 249
Goal setting, 107, 194
God, 151, 152
Goethe, Johann Wolfgang, 172
Going with the flow, 81
Goldberg, Natalie, 63
Goldstein, Joseph, 102
Gordon, James, 44
Gottman, John, 207–208
Gottman's Love Lab, 207
Gratitude, 84*t*, 87–88
Gratitude journal, 88
Gray, John, 215
Great Spirit, 152
GSR, 349
Guided imagery, 299–308
    benefits, 305–306
    conscious and subconscious mind, 302–303
    example script, 307–308
    hypnosis, 301–302, 302*f*
    imagery and visualization, 303
    improving the experience, 307
    process/procedure, 306–307
    RGI, 305
    sports, 303, 304–305

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

Guided imagery (*continued*)
  uses, 303–305
  what is it?, 305
Guillemets, Terri, 330
Guilt and worry, 112–116

H

Habits, 178
Hair growth in balding men, 54
Half boat pose, 337*t*
Half bow pose, 338*t*
Hall, E. T., 167
Hamilton, Bethany, 66
Handholding, 210, 214
Haney, C. J., 292
Hanh, Thich Nhat, 100, 101, 108, 272
Happiness
  aging and, 126
  money and, 195–198, 199
  relationships and, 207
  research study, 203
Hardiness, 66–70
Harrar, Sari, 364
Hassles, 11–12
Hatha yoga, 328, 331–333
Hatikvah, 364
"Have-to-haves" *vs.* "want-to-haves," 196
Head to the knee pose, 338*t*–339*t*
Headache, 46
  acupuncture and, 353
  yoga and, 331
Healing environment, 221–238
  air quality, 227
  aromatherapy, 226–227
  chromotherapy, 224–225
  color, 224–225
  defined, 224
  environmental stressors, 222
  ergonomics, 233–234
  feng shui, 232–233
  heat hypothesis/heat effect, 230
  learned response theory, 223
  light, 225–226
  make your home a place of sanctuary, 233
  nature, 230–231
  noise, 228–230
  organizing and simplifying, 231–233
  perception, 223
  SAD, 225
  smell, 226–227
  technology. *see* Technology and the environment
  temperature, 230
  violence and the environment, 230
Healing music, 366
Healing places, 233
Healing Words (Dossey), 158
Health
  dimensions of, 6–8
  emotional, 7
  holistic, 6, 7–8
  mental, 7
  physical, 6, 8*t*
  psychological, 44–45
  relationships and, 207
  social, 7
  social support, 204–205
  social ties and, 210
  spiritual, 7
  stress and, 4, 5*f*
Healthy People 2020, 45
Hearing loss, 228
Heart chakra (green), 318
Heart diseases, 48–49
  anger expression and, 124
Heart rate, 35*f*
  music and, 365
Heat effect, 230
Heat hypothesis, 230
Herbert, Ann, 156
Herbs, 350
Here-and-now experiences, 95
Herophilus, 241
Hesson, Margie, 65
Hidden sugars, 247
High-volume sound, 228–229, 229*f*
Hindsight, 115
Hippocampus, 229
Hippocrates, 43, 349
Hobbies, 106, 194
Hoeger, Werner and Sharon, 39
Holding hands, 210, 214
Holistic health, 6, 7–8
Home environment, 10
Home mortgage, 192
Homeostasis, 32, 45
Hostility, 126
Hot air balloon living, 175
Hot stone massage, 356
How to Meditate: A Guide to Self-Discovery (LeShan), 317
Howden, Judy, 153
Hugging and kissing, 209, 213
Humor, 362–364
Humor journal, 363
Huntsman, Jon M., 130
Huxley, Aldous, 146
Hypnosis, 282, 301–302, 302*f*
Hypothalamus, 34

I

Illegal drugs, 256
Imagery, 303. *see also* Guided imagery
Imagination, 300

Immune system, 48, 49–50, 55
  medium-term stress and, 47–48
Immunoglobulin A, 56
Impersonal information, 215
Inbreath, 271
Incremental muscle relaxation, 293
Indoor garden, 231
Indoor pollution, 227
Inflammation, 48, 51
Information overload, 11, 236
Informational support, 203
Inner mindfulness meditation, 105–106
Instrumental support, 203
Instrumental values, 137–138, 137*f*
Insulin, 247
Integrative medicine, 346
Integrity, 172
Intellectual health, 7, 8*t*
Intensity, 40
Interleukins, 49
"Internal jogging," 363
Internal locus of control, 69
Interpretation, 63, 71. *see also* Perception
Intimacy and love. *see* Relationships
Inventory of college students' recent life experiences (ICSRLE), 21, 21*f*
Iyashi, 53
Iyengar yoga, 328–329

J

Jacobson, Edmund, 290
James, William, 178
Jampolsky, Gerald, 97, 155
Japanese culture, 53
Jasmine, 227
Jets-hot air balloons comparison, 175
Job stress, 69, 193–195
Journaling, 368
Judgment/criticism/blaming, 84–85, 84*t,* 87
Jung, Carl Gustav, 6
"Just Listen," 213

K

Kabat-Zinn, Jon, 95, 96, 99, 103, 295, 296, 315, 322
Karoshi, 53
Kava, 350
Kazantzakis, Nikos, 68
Keller, Helen, 120, 226
Kemeny, Margaret, 56
Keyes, Ken, 101
Kiecolt-Glaser, Janice, 56, 210
Killingsworth, Matthew, 99
Kiyosaki, Robert, 189, 199
Knees to chest pose, 340*t*
Kotulak, Ronald, 365
Koyaanisqatsi, 11
Kripalu yoga, 329
Kundalini yoga, 329

L

Lakein, Alan, 167
Lakota perspective of peace and harmony, 135
Lao Tsu, 231
Latte factor, 189
Laugh-O-Gram Studio, 67
Laughter and humor, 362–364
Lavender, 226
Learn from your mistakes, 83
Learned optimism, 80
Learned response theory, 223
Learning, 52
Leaving things undone, 180
Left-nostril breathing, 277
Legumes, 247
Lemon, 227
LeShan, Lawrence, 317
Letting go of anger, 122
Levels of acceptable perfection, 179–180
Levels of responding, 83–88, 84*t*
  allowance/acceptance, 84*t,* 86–87
  attachment/rightness, 84, 84*t*
  discovery, 84*t,* 86
  effective/ineffective responses, 83, 84*t*
  gratitude, 84*t,* 87–88
  judgment/criticism/blaming, 84–85, 84*t*
  observation, 84*t,* 86
  resistance/complaining, 84*t,* 85–86
Levenson, Robert, 208
Lifebalance, 173–174
Lifebalance (Eyre/Eyre), 173
Lifestyle, healthy, 241–257
  alcohol use/abuse, 254–255
  drug use/abuse, 256
  eating disorders, 250–252
  exercise, 242–246
  healthy weight, 249–250
  nutrition, 246–249
  sleep, 252–254
  smoking, 254
  tobacco, 254
Lifetime Physical Fitness and Wellness (Hoeger/Hoeger), 39
Light, 225–226
Ling, Pehr Henrik, 355
"Lion laugh," 361
Lipragus, 54
Listening, 211–213
  autobiographical, 211–212
  empathic, 212–213
The Little Engine That Could?, 69
Little Finger, Leonard, 135
Living arrangements, 11
Living beyond your means, 196

Lizard Mind, 51
Lo-pan, 232
LOC, 69
Locke, John, 44
Locus of control (LOC), 69
Long, B. C., 292
Long-term chronic stress, 48–52
Lose-win style of conflict resolution, 216
Lottery winners, 196
Lotus position, 312
Love, 208–210
Love Lab, 207
Love language, 209
Loving contact, 214
Lower glycemic index foods, 247
Luskin, Fred, 154
Luthe, Wolfgang, 283
Lymphocytes, 49

M

M-time societies, 167
Macaulay, Thomas B., 141
Mad driver disease, 122
Magical mantra, 315
Magnetic resonance imaging (MRI), 227
Maisey-Ireland, Mary, 97
Management, 164
Mandala, 305
Manipulative and body-based methods, 347, 353–354
Man's Search for Meaning (Frankl), 83, 151
Mantra, 314
Mantra meditation, 314–316
Marcus Aurelius, 63
Marijuana, 256
Marital satisfaction, 207
Markova, Dawna, 156
Marriage, 207–208, 210
Marx, Groucho, 358
Massage, 353–354, 355–357
Massed study, 178
Master Yoda *(Star Wars),* 83
MBSR, 103
McEwen, Bruce, 51
Meaning and purpose, 151–152
Medical resonance therapy music (MRT-music), 366–367
Meditation, 17, 311–324
  benefits, 319–321
  brainwave activity, 320
  breath counting, 317
  breathing, 316–317
  chakra, 318
  common components, 313
  contemplation, 317
  correct approach, 323
  defined, 312
  duration, 322
  faith factor, 315
  FAQs, 321–322
  focus, 321
  lying down/sitting down, 322
  mantra, 314–316
  mindful, 103, 105–106
  physiological benefits, 320
  prayerful, 157
  psychological benefits, 320–321
  regular practice, 322
  relaxation response, 314
  thought-watching, 317–318
  TM, 315
  walking, 318–319
  when is best time to meditate?, 322
  yoga, 333
Medium-term chronic stress, 46–48
  effects of, 46–47
  immune system and, 47–48
Melatonin, 225
Melchart, Harold B., 176
Memory, 48
Men. *see also* Gender
  alcohol dependence, 256
  anger expression, 124
  exercise and, 244*f*
  humor, 363
  job stress, 69
  marriage, 207
  time and life management, 165, 166*f*
  type 2 diabetes, 51
Men Are from Mars, Women Are from Venus (Gray), 215
Mental drifting, 99
Mental health, 7, 8*t*
Mental imagery, 303. *see also* Guided imagery
Meridians, 350–351
Mesmer, Franz, 301
Meta-analysis, autogenic training, 284
Michels, Nathalie, 248
Mild hearing loss, 228
Mind as Healer, Mind as Slayer (Pelletier), 56
Mind-body connection, 43–57
  allostatic load, 45–46
  blaming the victim, 55
  cellular growth and repair, 49
  chronic stress. *see* Chronic stress
  communication, 52–56
  learning, 51
  nocebo effect, 55
  placebo effect, 54–55
  psychological, 44–45
  psychoneuroimmunology, 55–56
  psychosomatic illness, 53
Mind/body interventions, 347, 349–350
Mindful meditation, 103, 105–106
Mindful studying, 105
Mindful writing, 369–370

Mindfulness, 93–108
  acceptance of what is happening, 98–99
  beginner's mind, 97
  benefits, 102–103
  defined, 96
  detached observation, 98
  guilt and worry, 113, 115
  here-and-now experiences, 95
  inner mindfulness meditation, 105–106
  living fully in the moment, 105, 107
  MBSR, 103
  mindful studying, 105
  mindfulness self-efficacy, 98
  mindlessness, contrasted, 96
  moments of, 107
  nature of reality, 94–95
  non-attachment, 99
  non-judging, 97–98
  nonstriving, 99–100
  planning for the future, 107
  practicing being more mindful, 106–107
  sensory overload, 101
  simple mindful exercise, 104–105
  stress and, 103
  testing the principle, 103–104
  thought-watching, 105–106
  vipassana, 96
Mindfulness-based stress reduction (MBSR), 103
Mindfulness breaks, 106
Mindfulness self-efficacy, 98
Mindlessness, 96
Money-emotion connection, 186–187
Money management, 184–199
  ABCs, 186–189
  affluenza, 196, 197
  assessment, 186–187
  budget, 187–188
  control, 188–189
  credit, 192
  credit cards, 191–193, 195
  doodads, 189–191
  emotions, 186–187
  exercise (budget), 188
  exercise (credit cards), 192–193
  exercise (doodads), 190
  exercise (financial goals), 187–188
  exercise (income and expenditures), 188
  exercise (spending habits), 186
  happiness and, 195–198, 199
  job stress, 193–195
  money is simply a tool, 199
  money tips, 195
  reference anxiety, 196–197
  relationships and, 197–198, 197*f*
  saving, 190
  student loan debt, 185
Money tally, 187
Monk-being-chased-by-tigers story, 104
Monks-walking-through-the-woods story, 94
Monochromic time, 167
Monotonous color schemes, 225
Monster, 248
Mood
  exercise type and, 245*t*
  food/mood connection, 249
  improvement, pets and, 208
  music and, 364
Moscot, Harvey, 236
Mother-infant bonding, 214
Motor unit, 291, 291*f*
Mountain pose, 336*t*
Mozart effect, 366
MRI, 227
MRT-music, 366–367
Multitasking madness, 235, 237
Munsterberg, Hugo, 290
Muscle contraction, 291
Muscle endurance, 244
Muscle fiber, 291, 291*f*
Muscle fitness, 244
Muscle physiology, 291, 291*f*
Muscle relaxation exercise. *see* Progressive muscle relaxation (PMR)
Muscle strength, 244
Muscle tension, 353
Muscle tension and pain, 46
Music therapy, 364–367
  classical music, 366
  effects of music on the body and mind, 364–365
  healing music, 366
  on heart rate, 365
  mood and, 364
  Mozart effect, 366
  MRT-music, 366–367
  New Age music, 366–367
  perception, 366
  resonance, 367
  sing it out, 370
  stress hormones and, 366
"Musts," 88–89
MyFitness Pal, 246
Myocardial stunning, 37
Myotherapy, 355, 356
MyPlate on Campus, 247
Myths about stress, 40–41

N

Namaste, 154
Napier, Nancy J., 319
National Center for Complementary and Alternative Medicine (NCCAM), 345
National Sleep Foundation poll, 252
National Sleep Foundation's (NSF) Sleep in America polls, 252–253

Native Americans
  Alaska Native culture, 134, 136
  Great Spirit, 152
  peace and harmony, 135
  sacred circle, 135
  sacredness of special places, 159
  spirituality, 148
Natural breathing, 271, 274
Natural killer cells, 49–50
Natural law, 135
Natural light, 225, 226
Nature, 158, 230–231
Nature-centered spirituality, 159
Nature *vs.* nurture, 9
Naturopathy, 348–349
NCCAM, 345
Needleman, Jacob, 186
Negative self-talk, 79, 81*t*
Negative thinking, 76
Neroli, 227
Nervous system, 33–36, 35*f*, 55
NES, 292
Network diversity, 205
New Age music, 366–367
Nicklaus, Jack, 300
Nicotine, 254
Night eating syndrome (NES), 292
Nightingale, Earl, 75
Nightingale, Florence, 224
Niyama, 328
Nocebo effect, 55
Noise, 228–230, 229*f*
  decibels (dB), 228, 229*f*
  effects of, 228–229
  mild hearing loss, 228
  perceived noisiness, 228
  white noise, 229
Nolan, William, 158
Non-attachment, 99
Non-judging, 97–98
Nonoko's story, 61
Nonstriving, 99–100
Nontraditional medicine. *see* Complementary and alternative medicine (CAM)
Noradrenaline, 34
Norepinephrine, 34
Novak, Masuma, 51
Nun study, 112
Nutrition, 115, 246–249
  caffeine, 248
  ChooseMyPlate, 246–247
  cortisol connection, 249–250
  Dietary Guidelines for Americans, 246
  eating to cope, 249
  food/mood connection, 249
  fruits and vegetables, 247
  glycemic index, 247
  legumes, 247
  overeating, 248–249
  soft drinks, 248
  stress and, 247
  trans fatty acids, 248
  unused glucose, 249
  vitamin-mineral supplement, 246
  water, 248
  whole grains, 247

O

Obesity, 249–250
Obi-Wan *(Star Wars),* 102
Observation, 84*t,* 86, 87
Ocean therapy, 81
Odors, 226–227
Olpin, Michael. *see* Authors' anecdotes
Olympic silver and bronze medal winners, 79
On-site massage, 356
Optimists, 80
"Organization day," 232
Organizing and simplifying, 231–233
Ornish, Dean, 205
Outbreath, 271
Outdoor garden, 231
Outdoor workouts, 246
Over-exercising, 245. *see also* exercise
Over-the-counter drugs, 256
Overdoers, 178
Overeating, 248–249
owl style of conflict resolution, 217–218

P

P-time societies, 167
Paddison, Sara, 260
Paracelsus, 345
Parasympathetic nervous system (PNS), 33, 36
Pareto, Vilfredo, 165
Pareto's law, 165–166
Passive alertness, 263
Passive observation, 107
Passive progressive relaxation, 295–296
Passive progressive relaxation script, 296
Patanjali, 328
Patience, 121
Pavlov, Ivan, 81–82
Peace, 160
Peace in the moment, 100. *see also* Mindfulness
Peaceful environment, 234
Peale, Norman Vincent, 70
Peart, Neil, 122
Pelletier, Kenneth, 56
Pelvic tilt with diaphragmatic breathing, 278
Penguins, 203
People of the Seven Council Fires, 135

Peppermint, 227
Perceived noisiness, 228
Perceived stress scale (PSS), 19–20, 20*f*
Perceived support, 203
Perception, 59–73
    challenge, 66–67
    cognitive restructuring, 65
    commitment, 66
    control, 66, 67–70
    defined, 61
    environmental stressors, 223
    hardiness, 66–70
    how perception influences our stress level, 70
    locus of control (LOC), 69
    music, 366
    premature cognitive commitments, 68
    questions to ask to diffuse the situation, 70
    self-efficacy, 69–70
    self-limiting beliefs, 68–69
    stress comes from within, 62–63
    true danger, 61–62
Perfectionists, 177
Performance
    academic, 10, 10*f*
    stress and, 3–4, 5*f*
Personal constitution, 138–141
Personal expectations, 9–10
Personal finance. *see* Money management
Personalizing, 76
Pert, Candace, 53, 56
Pessimism, 76, 80
Pet therapy, 207, 208
Petitgrain, 227
Pets, 206–207
    mood-boosting power, 208
Physical activity. *see* Exercise
Physical environment. *see* Healing environment
Physical health, 6, 8*t*
Physical health issues, 11
Physical needs, 81
Physical touch, 209, 210, 214
Physiological benefits, meditation, 320
Physiological response to stress, 33–36
Pietrini, Pietro, 155
Pineal gland, 225
Pirsig, Robert, 102
Pittsinger, Ryan, 81
Placebo effect, 54–55, 149
Planning, 165
Planning for the future, 107
Pleasurable activities, 106
PNI, 55–56
PNS, 33, 36
Polychromic time, 167
POPP formula for prevention, 65, 373
Positive emotions, 112
Positive self-talk, 77–80, 81*t*
Post-traumatic stress disorder (PTSD), 77
Postnatal skin-to-skin contact, 214
Pound, Ezra, 299
Poverty, 198. *see also* Money management
Power language, 80
Power nap, 260, 265–266
Power of Positive Thinking, The (Peale), 70
Power of suggestion, 282
Power yoga, 329
Practical problems, 88
Prana, 152, 272, 318
Pranayama, 272, 328, 332
Prather, Hugh, 328
Pratyahara, 328
Prayer, 157–158
    in coronary care unit, 158
    frequency of prayer in America, 158
Prayerful meditation, 157
Premature aging, 50–51
Premature cognitive commitments, 68
Prescription drugs, 256
Present moment acceptance, 90
Primary colors, 225
Prioritized daily planning, 169*t*
Proceedings of the National Academy of Sciences, 50
Procrastination, 177–180
Progressive muscle relaxation (PMR), 289–297
    active PMR, 293–295
    all-or-none principle, 291
    anxiety and, 292–293
    appeals to Western culture, 293
    benefits, 292–293
    body scan, 295–296
    example script, 294–295, 296
    historical overview, 290–291
    how PMR works, 292
    incremental muscle relaxation, 293
    motor unit, 291, 291*f*
    muscle physiology, 291
    muscles and relaxation, 291–292
    NES and, 292
    passive PMR, 295–296
    yoga and, 292
Progressive neuromuscular relaxation. *see* Progressive muscle relaxation (PMR)
Protein-rich foods, 115
Protestant work ethic, 134
PSS, 19–20, 20*f*
Psychological benefits, meditation, 320–321
Psychological health, 44–45
Psychoneuroimmunology (PNI), 55–56
Psychophysiological conditions, 53
Psychosomatic illness, 53
PTSD, 77
Public speaking, 63, 107
Pulse rate, 17, 18

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

Q

Qi gong, 352
Quadrant planning, 170–173
Quality time, 209
Questions
  meditation, 321–322
  stress vulnerability questionnaire, 26*f*
  yoga class, 335–336
QuiGon *(Star Wars),* 102

R

Radial pulse, 17
RAK, 156
Ramsey, Dave, 198
Random acts of kindness (RAK), 156
Ratey, John, 67
Rational emotive behavior therapy (REBT), 88–90
RDI, 246
Real pain, 118
Reality, 94
REBT, 88–90
Received support, 203
Red Bull, 248
Reduced respirations technique, 275–276
Reference anxiety, 196–197
Reference daily in-takes (RDI), 246
Reflexology, 351, 351*f*
Reframing, 65
Reiki, 352
Relationships, 10, 205–210
  acts of service, 209
  be proactive, 218
  "Big 5" of stressors in, 208
  "Big Five" of stressors, 208
  communication. *see* Communication
  gifts, 209
  love, 208–210
  marital satisfaction, 207
  marriage, 207–208, 210
  money management, 197–198, 197*f*
  pets, 206–207, 208
  physical touch, 209
  qualities of working/destructive relationships, 210–211
  quality time, 209
  questions to ask, 209
  stress, 205–206
  supportive, 205
  words of affirmation, 209
Relaxation, 259–267. *See also* Stress-reduction techniques
  benefits, 262
  defined, 261
  musculoskeletal pain, 261
  passive alertness, 263
  power nap, 260, 265–266
  sensations, 264
  use good judgment, 264–265
Relaxation candles, 260
Relaxation guided imagery (RGI), 305. *see also* Guided imagery
Relaxation response, 314
Relaxation Response, The (Benson), 261
Relaxation technique, 115, 194
Relaxing breathing, 272–275
Relaxing sound, 229
Religion. *see* Spirituality
Religiosity, 146–147
Reproductive system, 35*f*
Resistance/complaining, 84*t,* 85–86, 87
Resolution phase (laughter), 363
Resonance, 367
Respiration rate, 17, 18
Responding. *see* Levels of responding
Rest-and-digest response, 36
Resting heart rate, 17
Reward yourself, 180, 194
Reyes, Barbara, 121
RGI, 305. *see also* Guided imagery
Right-nostril breathing, 276–277
Risk taking, 177
"Risking" (Emerson), 121
Road rage, 121, 122
Rockstar, 248
Romeo and Juliet (Shakespeare), 230
Roosevelt, Eleanor, 83, 112, 115
Rose, 227
Rosemary, 227
Roseto effect, 206
Routines, 107
Royal namaste greeting, 154
Rules, 123–124
Runaway eating, 250
Runaway Eating (Bulik et al.), 250
Russell, Bertrand, 197

S

Sacral chakra (orange), 318
Sacred circle of life, 135
Sacrum, 355
SAD, 225
Salutation to the Sun (yoga), 341*f*
Samadhi, 328
Sandalwood, 227
Sapadin, Linda, 177
Sapolsky, Robert, 67
Sarcasm, 362
Satchidananda, Swami, 326
Savant, Marilyn vos, 86
Saving
  strategies for, 190
Saw-sharpening activities, 172
Sax, Linda, 165
Saying "no," 179, 194, 204
Scared to death, 121
Schultz, Johannes, 282–283

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

Schwartz, Morrie, 371
Schweitzer, Albert, 344
Science of stress, 31–42
  acute stress, 37
  ANS responses to stress, 34–36
  chronic stress, 37–38
  effects of stress on body, 35*f*
  fight-or-flight response, 32–33
  FIT formula, 40
  general adaptation syndrome (GAS), 38–39, 45
  myths about stress, 40–41
  physiological response to stress, 33–36
  rest-and-digest response, 36
Scripts
  active progressive relaxation, 294–295
  autogenics, 284–286
  guided imagery, 307–308
  passive progressive relaxation, 296
Scrums, 203
Seasonal affective disorder (SAD), 225
Secret Power of Music, The (Tame), 364
Self-assessment. *see also* Stress assessment tools; Stress busting behavior
  breathing pattern, 17
  respiration rate, 17
  resting heart rate, 17
  Stress-o-Meter, 17–18
  stress result assessment, 18
Self-direction, 132
Self-efficacy, 69–70
Self-esteem, 79–80
Self-limiting beliefs, 68–69
Self-limiting statements, 68
Self-made borders, 82
Self-massage, 356–357
Self-talk, 77, 79, 81*t,* 304, 367
Seligman, Martin, 80, 203
Selye, Hans, 1, 3, 4, 38
Sense of humor, 362
Senseless kindness, 156
Sensory overload, 101
Serendipity, 176–177
Serenity Prayer, 81
Serotonin, 242, 247
7 Habits of Highly Effective People, The (Covey), 170, 207
Shakespeare, William, 44, 120, 126, 131
Shark style of conflict resolution, 217
Sheehan, George, 152
Shiatsu, 352
Shively, Carol, 51
Shopping, 187
Short naps, 368
Shoulder stand, 340*t*
Side angle pose, 336*t,* 337*t*
Sideline rage, 121
Silver Olympic medal winners, 79
Simonton, O. Carl, 306
Simonton, Stephanie, 306
Simple diaphragmatic breathing, 274
Simplifying, 174, 231–233
Simpson, Randolph, 121
Single knee to chest pose, 340*t*
Sisyphus, 234
Sit-down time, 175
Sitting side bend pose, 338*t*
Sivananda yoga, 329
Skeletal muscle, 291
Skin-to-skin contact, 214
Sleep, 252–254
  depression and, 253
  healthy sleep advice, 253–254
  how much, 253
  overuse of technology, 236
  Sleep in America poll (NSF), 252–253
  stress and, 18, 19, 47
  test anxiety, 115
Sleep-inducing brainwave activity, 47
Slow down, 177
SMART goals, 187
Smell, 226–227
Smoking, 133–134, 254
Smotherman, Ron, 99
SNS, 33, 36
Social cohesiveness of a community, 206
Social health, 7, 8*t*
Social networking, 236, 237
Social skills, 25
Social support
  defined, 202–203
  exercise and, 246
  health and, 204–205
  relationships. *see* Relationships
  stress and, 203–204
  types, 203
Social support network, 204
Social ties, 210
Socrates, 15
Soft drinks, 248
Solar plexus chakra (yellow), 318
Somaticizing, 112
Sorokin, Pitirim, 157
Sound, 228–230, 229*f*
Sources of stress
  academic demands, 10, 10*f*
  choices, 11
  daily hassles, 11–12
  employment decisions and finances, 10
  environmental stressors, 11
  family expectations and family life, 10
  information overload, 11
  living arrangements, 11
  personal expectations, 9–10
  physical health issues, 11
  relationships, 10
  time management, 9

Spa, 356
Spark: The Revolutionary New Science of Exercise and the Brain (Ratey), 67
Spiral twist (both sides), 339*t*
Spiritual dimension, 146
Spiritual health, 7, 8*t*
  five qualities of, 150–159
  stress busting behavior, 150
Spirituality, 144–160
  action plan for stress management, 159
  altruism, 155–157
  belief in a higher power, 152
  best-selling books, 146
  compassion for others, 153–157
  connectedness, 153
  defined, 146
  defining terms, 149
  ecospirituality, 158
  faith, 152
  forgiveness, 153–155
  health benefits, 149
  meaning and purpose, 151–152
  Native American perspective, 148
  nature, 158
  placebo effect, 149
  prayer, 157–158
  religiosity, compared, 146–147
  research studies, 148–150
  spiritual changes in students during the undergraduate years, 147
  stress management and, 145
  university courses, 146
Spirituality in Higher Education: Students' Search for Meaning and Purpose, 146
Split-page scheduling, 177
Sport drinks, 248
Sports massage, 356
Sports psychology, 304–305
St. Exupery, Antoine de, 206
Staff pose, 338*t*
Stage of exhaustion (GAS), 39
Stage of resistance (GAS), 39
Standing forward bend, 336*t*
Stanford Forgiveness Project, 154
Star Wars (film), 83, 102, 152
Startle response, 290
Sternberg, Esther, 44
"Stinkin' thinkin," 76
Stone, Arthur, 126
Stone, Linda, 235
Stream of consciousness, 77, 79
Stress
  acute, 4–5, 37
  biofeedback and, 350
  body, effects of, on, 35*f*
  chronic. *see* Chronic stress
  defined, 3
  exercise and, 19
  factors influencing impact of, 9*t*
  finding the balance, 3, 3*f*
  good/bad, 4
  impact, 45
  important aspects of, 3
  management of, basic approaches, 12
  myths, 40–41
  nutrition and, 115, 247
  performance in sports and, 304–305
  reduction. *see* Stress-reduction techniques
  relationships, 205–206
  social support and, 203–204
  sources of, 9–12
  subjective nature of, 40
  symptoms, 40
  time and, 164–165
  Yerkes-Dodson Principle, 3–4
  yoga and, 330
Stress assessment tools
  Ardell Wellness Stress Test, 22–23, 23*f*
  Assess Your Stress, 17*f*, 18
  daily stress diary, 25, 27
  inventory of college students' recent life experiences (ICSRLE), 21, 21*f*
  perceived stress scale (PSS), 19–20, 20*f*
  stress profile, 28
  stress vulnerability factors, 23, 25
  student stress scale, 23, 24*f*
  symptoms of stress: assessment, 18–19
  Tombstone Test, 25
Stress balls, 260
Stress busting behavior
  childhood value messages, 135
  healthy choices, 256
  lifestyle behaviors, 50
  mindfulness in daily life, 98
  money management checklist, 189
  peaceful environment, 234
  positive thinking, 78
  social support network, 204
  sources of stress, 12
  spiritual health, 150
  stress exhaustion, 39
  stress level checklist, 20
  thinking style, 71
  time zappers, 179
  worry, 114
Stress exhaustion, 39
Stress hormones, 9, 34, 48, 67, 366
Stress level checklist, 20
Stress-o-Meter, 17–18
Stress-prevention strategies. *see also* individual subentries
  communication, 210–215
  emotions, 110–126
  healing environment, 221–238
  lifestyle, healthy, 241–257
  mind-body connection. *see* Mind-body connection
  mindfulness, 93–108

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

Stress-prevention strategies (*continued*)
  money management, 184–199
  perception, 59–73
  relationships, 10, 205–210
  social support, 202–205
  spirituality, 144–160
  thinking and choosing, 74–90
  time and life management, 163–181
  values, 129–142
Stress profile, 28
Stress-reducing exercises, 244–245
Stress-reduction techniques
  autogenics, 281–287
  breathing, 269–279
  CAM. *see* Complementary and alternative medicine (CAM)
  deal directly with the cause, 367
  future planning, 373
  guided imagery. *see* Guided imagery
  laughter and humor, 362–364
  listen to your body, 367
  "little things," 367–371
  meditation. *see* Meditation
  music therapy, 364–367
  power nap, 260, 265–266
  progressive relaxation, 289–297
  relaxation, 259–267
  self-talk, 367
  "solutions" to avoid, 371–373
  writing, 368–370
  yoga, 326–342
Stress-related conditions, 48, 51–52
Stress-related drinking, 255
Stress-relief products, 260
Stress vulnerability factors, 23, 25
  coping style, 23
  environment, 23, 25
  genetics, 23
  social skills, 25
  stress vulnerability questionnaire, 26*f*
  thinking style, 23
Stress vulnerability questionnaire, 26*f*
Stressor, 4
Stretched child's pose, 337*t*
Stretching exercises, 244
Student loan debt, 185
Student stress scale, 23, 24*f*
Study breaks, 178
Substance use/abuse, 254–256
Successive moments of the present, 105
Suggestion, 282
"Sunday Sessions," 177
Support
  job stress and, 195
  social. *see* Social support
  social support network, 204
Surprises, 177
Surya Namaskar, 341*f*
Sutoresu, 53
Swami Satchidananda, 326
Swedish massage, 355–356
Sydenham, Thomas, 362
Sympathetic nervous system (SNS), 33, 36
Symptoms of stress: assessment, 18–19
Synthetic aromas, 227

T

Tagore, Rabindranath, 153
Tai chi, 352, 353
Take responsibility for your emotional upsets, 88
Tale of Two Cities, A (Dickens), 2
Tame, David, 364
Tang, Lin Yu, 180
Tangible support, 203
The Tao, 152
Taoist perspective on resisting, 85
Taoist yin-yang, 175
TCM, 348, 349
"Techno-cocoons," 237
Technology and the environment, 234–237
  alienation and isolation, 236
  computer vision syndrome (CVS), 236
  continuous partial attention, 235
  information overload and continuous change, 236
  lack of alone time, 236
  managing technology stress, 237
  mental health problems, 236
  multitasking madness, 235
  physical consequences, 236
  sleep deprivation, 236
  technostress, 234–235
Technostress, 11, 234–235
Teddy bear style of conflict resolution, 216–217
Teilhard de Chardin, Pierre, 144
Television viewing, 178
Temperature, 230
Temperature biofeedback, 349
Templeton, John, 156
10-minute rule, 40
Tend-and-befriend, 32–33, 214
Terminal values, 137–138, 137*f*
Test anxiety, 113–115
Test-taking worries, 114–115
Texting, 178
Thanks! How the New Science of Gratitude Can Make You Happier (Emmons), 86
Therapeutic massage, 353–354
Therapeutic touch, 352, 355
Thich Nhat Hanh, 100, 101, 108
Thinking and choosing, 74–90
  ABCDE technique, 89–90
  choice, 82–83
  cognitive distortion, 75–76
  conditioned-response theory, 81–82

Copyright 2021 Cengage Learning. All Rights Reserved. May not be copied, scanned, or duplicated, in whole or in part. Due to electronic rights, some third party content may be suppressed from the eBook and/or eChapter(s). Editorial review has deemed that any suppressed content does not materially affect the overall learning experience. Cengage Learning reserves the right to remove additional content at any time if subsequent rights restrictions require it.

Thinking and choosing (*continued*)
  effective/ineffective responding, 83–88
  going with the flow, 81
  learned optimism, 80
  positive self-talk, 77–80
  power language, 80
  REBT, 88–90
  "stinkin' thinkin," 76
  thinking errors, 76–77
  thought-stopping, 80
Thinking errors, 76–77
Thinking style, 23
Thoesen, Carl, 154
Thomas-Kilman Mode Instrument, 215
Thoracic breathing, 18, 271
Thoreau, Henry David, 104, 181, 243
Thought-stopping, 80
"Thought" time, 177
Thought-watching, 105–106, 317–318
Three-princes-of-serendipity story, 176
Throat chakra (blue), 318
Thunderbolt pose, 337*t*
Tiger breathing (exhale) pose, 337*t*
Tiger breathing (inhale) pose, 337*t*
Time, 164
Time and life management, 163–181
  ABC123 prioritized planning, 167–169
  antiplanning, 175
  apps and programs, 180–181
  balancing structure and spontaneity, 175
  "best time" of the day, 179
  cramming, 178
  doing what really matters, 174–175
  gender, 165, 166*f*
  "I have plenty of time for what matters," 181
  lifebalance, 173–174
  Pareto's law, 165–166
  planning for control, 165–167
  procrastination, 177–180
  quadrant planning, 170–173
  questions to ask, 170
  serendipity, 176–177
  simplifying, 174
  sit-down time, 175
  split-page scheduling, 177
  stress, 164–165
  time management, defined, 164
  time zapper, 178, 179
Time and life management apps, 180–181
Time/duration, stress, 40
Time log, 179, 182
Time management, 9
Time out, 68
Time wasters, 180
Time zapper, 178, 179
Titanic (film), 21
TM, 315
To Do, 181
Tobacco companies, 133–134
Tobacco use, 254
Tobin, Gary, 246
Togetherness, 209
Toltec Teachings Book, 64
Tomasko, Felicia, 357
Tombstone Test, 25
Torrijos, Omar, 121
Touching, 209, 214
Touching region, 214
Tournier, Paul, 157
Traditional Chinese Medicine (TCM), 348, 349
Tranquilizers, 256
Trans fatty acids, 248
Transcendental meditation (TM), 315
Trello, 181
Triangle pose, 337*t*
Trigger-point therapy, 355
True danger, 61–62
True, Reiko Homma, 53
Tuesdays with Morrie (Albom), 370–371
Tunkasila, 135
"Turtle style" of conflict management, 216
20-20-20 rule, 236
Twisted triangle pose, 337*t*
Type 2 diabetes, 51
Tyranny of the urgent, 167, 170*f*

U

Ueland, Brenda, 369
Ujjayi breathing, 332
Ultraviolet light, 225–226
Unbalance, 173
United States
  coffee, 248
  frequency of prayer in, 158
  healthy lifestyle, 254
  spirituality, 146
  values, 134
  yoga, 328
Unreal pain, 118
Unreality, 94
Unused glucose, 249
Upset stomach, 46
Upward bow, 339*t*
Upward straight legs, 340*t*
Urgency *versus* importance, 167, 170*f*
U.S. Constitution, 141
Uttanasana, 332

V

Valerian, 350
Valuable-use-of-my-time question, 80

Values, 129–142
  acquisition, 136
  advertising, 133–134
  beliefs, 136–137
  clarification, 138
  clarifying and prioritizing, 139–140
  cognitive dissonance, 132
  cultural differences, 134–136
  within cultures, 134–136
  defined, 130
  dharma, 131
  discovering, 131–132
  dynamic quality of, 136
  instrumental values, 137–138, 137*f*
  personal constitution, 138–141
  sources of, 133–134
  terminal values, 137–138, 137*f*
  types of, 137–138
  understanding, 130–131
  United States, 134
Values acquisition, 136
Values clarification, 138
Vasodilation, 283
Vegetables, 247
Venting, anger, 125
Verbal compliments, 209
Video game marathon, 180
Violence and the environment, 230
Vipassana, 96
Virabhadrasana II, 331
Visualization, 303. *see also* Guided imagery
Visualization breathing, 277
Vitamin-mineral supplement, 246
Vogt, Oskar, 282
Voltaire, 345
Volunteer work, 131, 157

W

Waldinger, Robert, 207
Walking, 243, 246
Walking meditation, 318–319
Walpole, Hugh, 176
Walt Disney, 67
Warrior I pose, 336*t*
Warrior II pose, 331
"Wasted" time, 180
Water, 248
Watts, Alan, 95, 102
Ways and Power of Love, The (Sorokin), 157
Weeds, 60
Weight lifting exercises, 244
Welcome surprises, 177
White, E. B., 166
White noise, 229
Whole grains, 247
Williamson, Marianne, 153
Win-lose style of conflict resolution, 217
Win-win style of conflict resolution, 218
Winter, Barbara J., 152
Witvliet, Charlotte, 154
Wolf, Stewart, 206
Women. *see also* Gender
  alcohol dependence, 256
  exercise and, 244*f*
  greater stress level, 37
  humor, 363
  prayer and, 158
  tend-and-befriend, 33
  time and life management, 165, 166*f*
Wooden, John, 130
Words of affirmation, 209
Work rage, 121
Workflowy, 181
Workout routines, 244
Worriers, 177
Worry, 107, 112–116
  managing, 112–113
  mind and, 114
  panic and, 114
  stress busting behavior, 114
  test-taking worries, 114–115
Worry book, 253
Worry turned to panic, 114
Writing, 368–370
Wu-men, 93

Y

Yama, 328
Yarbrough, Elaine, 214
Yerkes, Robert, 3
Yerkes–Dodson Principle, 3–4
Yin and yang (Taoist symbol), 175
Yoga, 326–342
  Ashtanga (power yoga), 329
  background, 327–328
  basic principles, 333–334
  benefits, 329–331
  Bikram, 329
  breathing (pranayama), 332
  cautionary note, 334–335
  defined, 327
  Hatha, 328, 331–333
  headache and, 331
  Iyengar, 328–329
  Kripalu, 329
  Kundalini, 329
  limbs/branches, 328
  meditation (dhyana), 333
  overview of, 328–329
  PMR and, 292

Yoga (*continued*)
  postures (asanas), 331–332
  questions to ask, 335–336
  sample poses, 336–342
  Sivananda, 329
  stress and, 330
  systems/styles, 328–329
  tips/hints, 335
  ujjayi breathing, 332
  well-being, 330*t*
  “2016 Yoga in America” study, 328
Yoga poses, 336–342
Yoga sutras, 328
Youngman, Henny, 184

Z

Zen and the Art of Motorcycle Maintenance (Pirsig), 102
Zigler, Zig, 76